

- **OI WATERPROOFING SOLUTIONS**
- **02 SEALANT SOLUTIONS**
- **03 CONCRETE REPAIR SOLUTIONS**
- **94 FLOORING SOLUTIONS**
- **05 TILING SOLUTIONS**





TORCH ON MEMBRANES

Bituplus E

Bituplus E 5180

Bituplus Ultra E4180

Bituplus Ultra E4200

Bituplus Ultra E4270

Bituplus Ultra FLEX

Bituplus P

Bituplus Ultra P4180

Bituplus Ultra P4200

Bituplus Ultra P4270

Bituplus G 4140

Bituplus AR 4000

Plastifelt

Plastifelt Ultra

Easyfelt P4160

SBS modified bituminous waterproofing membrane

APP modified bituminous waterproofing membrane

Mineral surfaced bituminous waterproofing membrane

Polymer modified root inhibiting waterproofing membrane

Fibre reinforced polymer modified bituminous waterproofing membrane

APP modified polyester reinforced bituminous waterproofing membrane

Oxidized bituminous waterproofing membrane





SELF ADHESIVES MEMBRANES

Bitustick Self adhesive bituminous waterproofing membrane

Bitustick 15 HDPE surfaced bituminous waterproofing membrane

Bitustick 1000 Bituminous self adhesive waterproofing membrane

Bitustick P Polyester reinforced waterproofing membrane

Bitustick XL Cross laminated waterproofing membrane

Bitustick XLS Solar reflective white cross laminated waterproofing membrane

Bitustick XLR Fibre reinforced waterproofing membrane

Bitustick AL Aluminum surfaced solar reflective waterproofing membrane

Bitustick R 250 Polyester fleece surfaced protection membrane

Bitustick R 300 Geo-textile fleece surfaced protection membrane

Bitustick R 400 Polypropylene fleece surfaced protection membrane

Bitustick R 3000 Cross laminated waterproofing membrane

DAMP PROOF COURSE

Polyshield HD Heavy duty bituminous damp proof membrane

Polyshield Modified bituminous damp proof membrane





PROTECTION BOARDS

Bituboard Fibre impregnated asphaltic protection board

Bituboard Ultra Fibre impregnated asphaltic protection board

BITUMEN COATINGS

Polycoat Bitumen emulsion paint

Polycoat RBE Rubberized bitumen emulsion

Polycoat RBE 5 SBS modified bituminous coating

Polycoat RBE 10 Rubberized bitumen emulsion

Polycoat RBE 15 SBS modified bitumen emulsion

Polycoat RBE 1000 SBS modified bitumen jellified emulsion

Polycoat FBR Fiber reinforced bitumen paint

Polycoat WB Bitumen emulsion paint

Easybit Bitumen emulsion





LIQUID COATINGS

Polyflex

Polyflex S

Polyflex Combo

Polycryl FR

Polycryl PF

Polytex

Polytherm AC

Polythane P

Bitubond HM

Bitubond N

Polyasphalt 60/70

Polycure ACW

Polyzinc

Acrylic modified cementitious waterproofing coating

Acrylic modified cementitious waterproofing coating

Acrylic modified elastomeric cementitious waterproofing and protective coating for concrete

Acrylic based flexible vapor proof protective coating

Single component, acrylic waterproofing and protective coating

Elastomeric acrylic waterproofing and protective coating

Highly efficient, energy-saving flexible coating

Liquid applied waterproofing and protective coating

Hot poured waterproofing membrane

Single component solvent based synthetic rubber

Penetration grade bitumen

Acrylic based white pigmented concrete curing compound

Zinc epoxy corrosion protective coating





WATERSTOPS

Polystop Internal and external PVC waterstop

Hydrophilic rubber based on polyurethane

PIPES WRAPPING TAPES

Bitutape 150 PVC Anti-corrosive pipe wrapping tape

Bitutape 165 PVC Anti-corrosive pipe wrapping tape

Bitutape Primer Solvent based bitumen primer

Bitutape Putty-K Moulding putty

Bitutape TS

Twin sided adhesive bitumen tape

PRIMERS

Polyprime SB Solvent based bitumen primer

Polyprime WB Water based bitumen primer





WATERTITE

Watertite CL 252

Sealing tape

OTHERS

Al Hosan

Bituminous roofing felt

SINGLE PLY MEMBRANES

Polyproof Ultra Plus TS

Polyproof Ultra TS

Polyproof Ultra TSD

Polyproof EPU

Polyproof Ultra Plus

Polyproof Ultra

Single-sided, sanded, self adhesive HDPE tape

Single-sided, plain finish, self adhesive HDPE tape

Double-sided, self adhesive HDPE tape

Two-component, hybrid polyurethane based, flexible sealing compound

Fully-bonded, sand coated, pressure sensitive HDPE waterproofing membrane

Self adhesive, plain finish HDPE waterproofing membrane





POLYFOAMS

Polyfoam CPS 40 BA

Polyfoam CPS-40P

Polyfoam I-20

Polyfoam I-25

Polyfoam I-80

Polyfoam I-40FR

Polyfoam PIR-35 BA

Polyfoam PIR-50 BA

Polyfoam PIR-40BA

Polyfoam SS 35

Polyfoam SS-40A

Polyfoam SS 50

Polyfoam SS 60

Two-component, polyurethane foam system

Four-component PIR system

Two-component, polyurethane injection/pouring foam system

Two-component, polyurethane injection/pouring foam system

Two-component, polyurethane injection foam system

Two-component, polyurethane injection foam system

Two-component, polyisocyanurate block system

Two-component, polyisocyanurate block system

Two-component, polyisocyanurate block system

Two-component, spray polyurethane foam (SPF) system

Two-component, spray-applied polyurethane foam system

Two-component, spray polyurethane foam (SPF) system

Two-component, spray polyurethane foam (SPF) system





POLYFOAMS

Polyfoam Glue

Polyfoam - MDI

Polyfoam MDI-GA

Polyfoam PIR-200

Polyfoam BA

Polyfoam SS-45

Polyfoam SS-45A

Polyfoam CPS 40BA IM/50

Polyfoam CAT 6908

Polyfoam DS-45P

Two-component, polyurethane glue system

Diphenylmethane diisocyanate

Diphenylmethane diisocyanate

Three-component, polyisocyanurate block system

Polyurethane polyfoam BA

Two-component, spray-applied polyurethane foam system

Two-component, spray-applied polyurethane foam system

Two-component, polyurethane foam system

Gelling catalyst, PIR reaction

Three-component, polyurethane foam system





Bituplus E

SBS modified bituminous waterproofing membrane

Bituminous waterproofing membrane, modified with SBS polymers for excellent waterproofing and low temperature flexibility properties.

CHARACTERISTICS

- ► Excellent resistance to positive water & vapor pressure
- ► Good dimensional stability under tension
- Excellent flexibility. Can accommodate high structural movements
- ► High puncture and fatique resistance
- ► Excellent tensile and tear strengths
- ► High resistance against water borne chemicals
- Exhibits good low temperature flexibility with no physical strain









DESCRIPTION

Bituplus E is a bituminous waterproofing membrane manufactured by blending a mixture of bitumen and SBS (Styrene Butadiene Styrene) polymers to obtain excellent waterproofing and low temperature flexibility properties. The polymerized bitumen is coated onto a dimensionally stable reinforcement core of non woven spun bond polyester rot-proof fabric.

FIELDS OF APPLICATION

Bituplus E membrane is typically used for waterproofing / damp proofing of the following areas:

- concrete foundations & footings
- basements
- pile heads
- swimming pools & water retaining structures (externally)
- tunnels
- wet areas (kitchens & bathrooms)

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.



Priming

Apply Polyprime SB* (Solvent based primer) @4-6 m²/L to a clean, smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. The primer promotes the adhesion between the membrane and the concrete surface.

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bituplus E membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Bituplus E membrane is installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane

TDS_Bituplus E_GCC_0324

flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the underlying surface. Caution: Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Protection

Bituplus E should be protected from getting damaged due to the ongoing site activities and during backfilling. Membranes laid on horizontal surfaces can be protected either by a cement sand screed (50mm thick) or by an asphaltic protection board (Bituboard)*. On vertical surfaces the membrane has to be protected with Bituboard. Bituboard can be fixed on the membrane by torching the underside of the board, or with a double sided bitumen adhesive tape (Watertite TS 15)*.

Please contact our technical service team for specific requirement.

STANDARDS

Bituplus E membranes are tested and conform to the requirements of ASTM and UEAtc 2001 standards.

STORAGE & SHELF LIFE

Bituplus E membrane rolls whether loose or on pallets have to be stored vertically in a shaded area, neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus E contains a tacky bitumen compound which can stick to human skin during application. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY	
Bituplus E	1m x 10m, wt 41kg#
Polyprime SB	20L pail & 200L drum
Bituboard	3.2mm 2m x 1m, wt 7.7kg# 6.0mm 2m x 1m, wt 14.0kg#
Watertite TS 15	10m x 50mm, wt 0.60kg
# Approximate weight	

TECHNICAL SPECIFICATION PROPERTIES VALUES TEST STANDARDS 4200 **Product** 4180 Thickness, [mm] 4.0 4.0 DIN EN 1849-1 Mass per unit area, 4.0-5.5 4.0-5.5 DIN EN 1849-1 $[kg/m^2]$ Reinforcement 200 EN 29073-1 [polyester], [g/m²] Coating asphalt Styrene Butadiene Styrene Polymer Modified Asphalt Softening point [R&B], [°C] >110 ASTM D 36 Penetration @25°C 20-35 ASTM D 5 [0.1 mm]Tensile strength [L/T], [N/5cm] 800/600 850/650 DIN EN 12311-1 Elongation at break [L/T], [%] 40/50 40/50 DIN EN 12311-1 Tear resistance [L/T], [N] 160/180 180/200 DIN EN 12310-1 >400/300 >500/400 ASTM D 5147 / D 4073 Resistance to static loading Static: Los **DIN EN 12730** Hydrostatic BS EN 12390 pressure No leakage @ 5 bar [50m] (Part 8) Water absorption [BSP], [%] < 0.2 ASTM D 5147 Heat resistance @100°C No flow DIN EN 52 123 Low temperature -3°C to -10°C flexibility ASTM D 5147 Dimensional stability, [%] ASTM D 6164 < 1 VOC [g/L] < 50 ASTM D3960 / D2369

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



Bituplus E 5180

SBS modified bituminous waterproofing membrane

Bituminous waterproofing membrane, modified with SBS polymers for excellent waterproofing and low temperature flexibility properties.

CHARACTERISTICS

- ► Excellent resistance to positive water & vapor pressure
- ► Good dimensional stability under tension
- Excellent flexibility. Can accommodate high structural movements
- ► High puncture and fatigue resistance
- ► Excellent tensile and tear strengths
- ► High resistance against water borne chemicals
- ► Exhibits good low temperature flexibility with no physical strain





DESCRIPTION

Bituplus E 5180 is a bituminous waterproofing membrane manufactured by blending a mixture of bitumen and SBS (Styrene Butadiene Styrene) polymers to obtain excellent waterproofing and low temperature flexibility properties. The polymerized bitumen is coated onto a dimensionally stable reinforcement core of non woven spun bond polyester rot-proof fabric

FIELDS OF APPLICATION

Bituplus E 5180 membrane is typically used for waterproofing / damp proofing of the following areas:

- concrete foundations & footings
- basements
- pile heads
- swimming pools & water retaining structures (externally)
- tunnels
- wet areas (kitchens & bathrooms)

APPLICATION INSTRUCTIONS

The application temperature should be between 5° C to 55° C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.



Priming

Apply Polyprime SB* (Solvent based primer) @4-6 m²/L to a clean, smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. The primer promotes the adhesion between the membrane and the concrete surface.

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bituplus E 5180 membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Bituplus E 5180 membrane is installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane

flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the underlying surface. Caution: Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Protection

Bituplus E 5180 should be protected from getting damaged due to the ongoing site activities and during backfilling. Membranes laid on horizontal surfaces can be protected either by a cement sand screed (50mm thick) or by an asphaltic protection board (Bituboard)*. On vertical surfaces the membrane has to be protected with Bituboard. Bituboard can be fixed on the membrane by torching the underside of the board, or with a double sided bitumen adhesive tape (Watertite TS 15)*.

Please contact our technical service team for specific requirement.

STANDARDS

Bituplus E 5180 membranes are tested and conform to the requirements of ASTM and UEAtc 2001 standards.

STORAGE & SHELF LIFE

Bituplus E 5180 membrane rolls whether loose or on pallets have to be stored vertically in a shaded area, neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Approximate weight

Bituplus E 5180 contains a tacky bitumen compound which can stick to human skin during application. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY	
Bituplus E 5180	1m x 10m, wt 51kg#
Polyprime SB	20L pail & 200L drum
Bituboard	3.2mm 2m x 1m, wt 7.7kg# 6.0mm 2m x 1m, wt 14.0kg#
Watertite TS 15	10m x 50mm, wt 0.60kg

< 1 All values given are subject to 5-20% tolerance

stability, [%]

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $+23^{\circ}\text{C}$ and 50°W relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



ASTM D 6164

TECHNICAL SPECIFICATION PROPERTIES TEST VALUES STANDARDS Thickness, [mm] 5.0 DIN EN 1849-1 Mass per unit area, $[kg/m^2]$ 5.0-6.0 DIN EN 1849-1 Reinforcement 180 EN 29073-1 [polyester], [g/m²] Coating asphalt Styrene Butadiene Styrene Polymer Modified Asphalt Softening point [R&B], [°C] >110 ASTM D 36 Penetration @25°C 20-35 [0.1 mm]ASTM D 5 Tensile strength [L/T], [N/5cm] 800/600 DIN EN 12311-1 Elongation at break [L/T], [%] 40/50 DIN EN 12311-1 Tear resistance DIN EN 12310-1 [L/T], [N]180/200 >500/400 ASTM D 5147 / D 4073 Resistance to static loading **DIN EN 12730** Static: Los Hydrostatic No leakage BS EN 12390 pressure @ 5 bar [50m] (Part 8) Water absorption [BSP], [%] < 0.2 ASTM D 5147 Heat resistance @100°C No flow DIN EN 52 123 Low temperature -3°C to -10°C flexibility ASTM D 5147 Dimensional



Bituplus ULTRA E4180

surfaces.

SBS modified bituminous waterproofing membrane

Bituminous waterproofing membrane, modified with SBS polymers for excellent waterproofing and low temperature flexibility properties

CHARACTERISTICS

- ► Polymer rich compound. Easy and strong seal on overlaps.
- ► High flexibility even in low temperature. Easy application on corner details.
- ► High resistance against hydrostatic pressure. Suitable for deep basement applications.
- ► Good dimensional stability under tension.
- ► Excellent adhesion on vertical surfaces. Can be left with protection board for up to 4 weeks before backfilling.
- ► User friendly printed films with stick timer aids easy and correct application.
- ► High mechanical strengths and fatigue resistance properties.









DESCRIPTION

Bituplus ULTRA E4180 is an elastomeric high performance bitumen based torch applied waterproofing membrane. The Bituplus ULTRA range of waterproofing membranes has been developed with special selected components and advanced technologies, in order to offer premium quality and superior features and performance, even under extreme conditions.

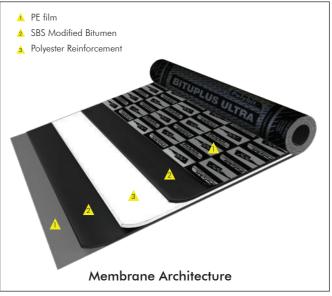
The right blend of the high quality bitumen and polymers, coupled with various reinforcements, provides excellent resistance to high hydrostatic pressure and better flexibility, strength and heat resistance.

In order to offer a superior sealing of the overlap joints, the polyester used as the carrier is positioned in a carefully chosen position, while the innovative enhanced thermofusible film applied on the membrane has clear demarcation lines for proper alignment of the membranes with the recommended overlap area.

With the state-of-the art homogenizing facility, the bitumen compound is enriched on its cohesive links at microscopic level. This simply means a high level close-



knit interlocking between cells and uniform distribution of polymers that result in excellent adhesion of the molten bitumen compound during application, even on vertical



For illustration Purpose only

FIELDS OF APPLICATION

Bituplus ULTRA E4180 membrane is typically used for waterproofing / damp proofing of the following areas:

- Building basements
- Pileheads
- Roofs & parapets
- Concrete foundations
- Building Footings
- Bridge piers
- Bridge Viaducts
- Underpasses
- Box culverts
- Retaining walls
- Holding tanks & reservoirs

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Priming

Apply Polyprime SB* (Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel

Fig. 1

Bitumastic/Polyseal PS
Bituplus ULTRA
Bituboard
Protection screed
Angle fillet

Application & Termination details

For illustration Purpose only

to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope laps. Begin membrane application by unrolling the roll of Bituplus ULTRA E4180 membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Bituplus ULTRA E4180 membrane is installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the underlying surface.

Caution: Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

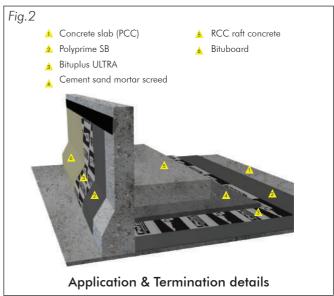
Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Corner Detailings

All internal corners shall be provided with an appropriate cement sand angle fillet. External corners shall be chamfered as per the manufacturer's recommendations. Prior to the application of the membrane on all internal and external corners, reinforcement strips shall be laid as per the details provided in Fig.3 & Fig.4.

Protection

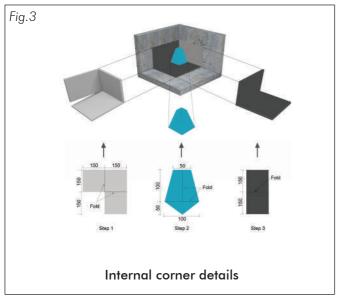
Bituplus ULTRA E4180 membrane shall be protected from getting damaged due to the ongoing site activities



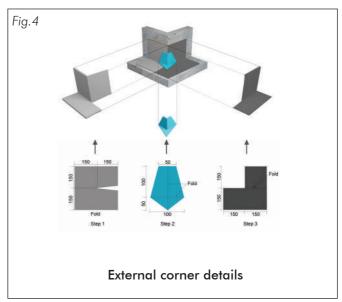
For illustration Purpose only



3



For illustration Purpose only



For illustration Purpose only

and during the backfilling process. Membranes laid on horizontal surfaces can be protected by a cement sand screed (50mm thick). On vertical surfaces the membrane has to be protected with Bituboard. Bituboard can be fixed on the membrane by torching the underside of the board. Please contact our technical service team for specific requirement.

STANDARDS

Bituplus ULTRA E4180 membrane is tested and confirms to the requirements of ASTM and UEAtc 2001 standards.

STORAGE & SHELF LIFE

Bituplus ULTRA E4180 membrane rolls whether loose or on pallets have to be stored vertically in a shaded area, neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus ULTRA E4180 contains a tacky bitumen compound which can stick to human skin during application. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY

Bituplus ULTRA E4	180	1m x 10m, wt 41kg#
*Polyprime SB		20L pail & 200L drum
*Bituboard	3.2mm 4.0mm 6.0mm	2m x 1m, wt 7.7kg# 2m x 1m, wt 9.6# 2m x 1m, wt 14.0kg#

^{*}Refer to website for TDS # Approximate weight

TECHNICAL SPECIFICATION	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	TEST STANIDARDS
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4.0	EN 1849-1
Mass, [kg/m²]	4.0-4.3	EN 1849-1
Core reinforcement [polyester], [g/m²]	180	EN 29073-1
Coating asphalt	Styrene butadiene styrene polymer modified bitumen	
Softening point [R&B], [°C]	120 <u>+</u> 10	ASTM D 36
enetration @25°C, [dmm]	15-30	ASTM D 5
ensile strength [L/T], [N/5cm]	850/650	EN 12311-1
longation at break [L/T],[%]	40/50	EN 12311-1
ear strength [L/T], [N]	550/400	ASTM D 5147
lail tear strenght [L/T], [N]	200/220	EN 12310-1
Resistance to static loading	Static : L ₂₅	EN 12730
Vater absorption,[%]	<0.2	ASTM D 5147
Hydrostatic pressure @ 5bar	No leakage	BS EN 12390
ow temperature flexibility, [°C]	0 to -10	ASTM D 5147
eat resistance @100°C	No Flow	EN 52123
imensional stability, [%]	<1	ASTM D 6164

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bituplus ULTRA E4200

SBS modified bituminous waterproofing membrane

Bituminous waterproofing membrane, modified with SBS polymers for excellent waterproofing and low temperature flexibility properties

CHARACTERISTICS

- ► Polymer rich compound. Easy and strong seal on overlaps.
- ► High flexibility even in low temperature. Easy application on corner details.
- ► High resistance against hydrostatic pressure. Suitable for deep basement applications.
- ► Good dimensional stability under tension.
- ► Excellent adhesion on vertical surfaces. Can be left with protection board for up to 4 weeks before backfilling.
- ► User friendly printed films with stick timer aids easy and correct application.
- ► High mechanical strengths and fatigue resistance properties.









DESCRIPTION

Bituplus ULTRA E4200 is an elastomeric high performance bitumen based torch applied waterproofing membrane. The Bituplus ULTRA range of waterproofing membranes has been developed with special selected components and advanced technologies, in order to offer premium quality and superior features and performance, even under extreme conditions.

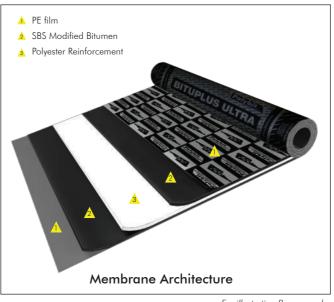
The right blend of the high quality bitumen and polymers, coupled with various reinforcements, provides excellent resistance to high hydrostatic pressure and better flexibility, strength and heat resistance.

In order to offer a superior sealing of the overlap joints, the polyester used as the carrier is positioned in a carefully chosen position, while the innovative enhanced thermofusible film applied on the membrane has clear demarcation lines for proper alignment of the membranes with the recommended overlap area.

With the state-of-the art homogenizing facility, the bitumen compound is enriched on its cohesive links at microscopic level. This simply means a high level close-knit interlocking



between cells and uniform distribution of polymers that result in excellent adhesion of the molten bitumen compound during application, even on vertical surfaces.



For illustration Purpose only

FIELDS OF APPLICATION

Bituplus ULTRA E4200 membrane is typically used for waterproofing / damp proofing of the following areas:

- Building basements
- Pileheads
- Roofs & parapets
- Concrete foundations
- Building Footings
- Bridge piers
- Bridge Viaducts
- Underpasses
- Box culverts
- Retaining walls
- Holding tanks & reservoirs

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

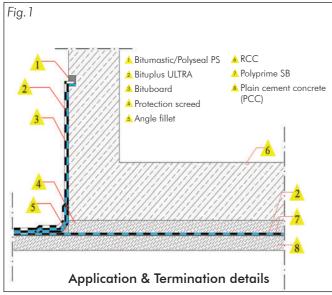
The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Priming

Apply Polyprime SB* (Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel



For illustration Purpose only

to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope laps. Begin membrane application by unrolling the roll of Bituplus ULTRA E4200 membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Bituplus ULTRA E4200 membrane is installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the underlying surface.

Caution: Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

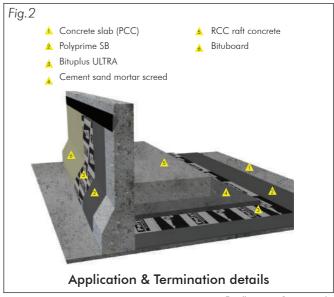
Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Corner Detailings

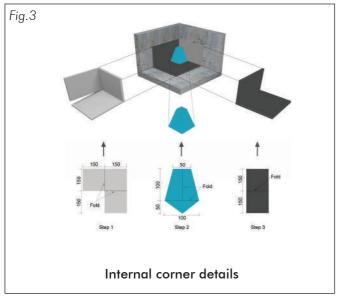
All internal corners shall be provided with an appropriate cement sand angle fillet. External corners shall be chamfered as per the manufacturer's recommendations. Prior to the application of the membrane on all internal and external corners, reinforcement strips shall be laid as per the details provided in Fig.3 & Fig.4.

Protection

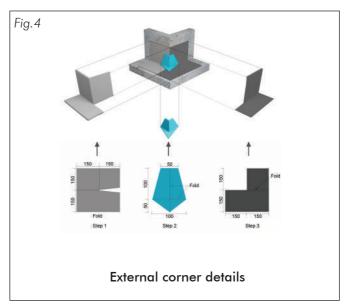
Bituplus ULTRA E4200 membrane shall be protected from getting damaged due to the ongoing site activities



For illustration Purpose only







For illustration Purpose only

and during the backfilling process. Membranes laid on horizontal surfaces can be protected by a cement sand screed (50mm thick). On vertical surfaces the membrane has to be protected with Bituboard. Bituboard can be fixed on the membrane by torching the underside of the board. Please contact our technical service team for specific requirement.

STANDARDS

Bituplus ULTRA E4200 membrane is tested and confirms to the requirements of ASTM and UEAtc 2001 standards.

STORAGE & SHELF LIFE

Bituplus ULTRA E4200 membrane rolls whether loose or on pallets have to be stored vertically in a shaded area, neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus ULTRA E4200 contains a tacky bitumen compound which can stick to human skin during application. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SU	LY

Bituplus ULTRA	E4200	1m x 10m, wt 41kg#
*Polyprime SB		20L pail & 200L drum
*Bituboard	3.2mm 4.0mm 6.0mm	2m x 1m, wt 7.7kg# 2m x 1m, wt 9.6# 2m x 1m, wt 14.0kg#

^{*}Refer to website for TDS # Approximate weight

PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4.0	EN 1849-1
Mass, [kg/m²]	4.0-4.3	EN 1849-1
Core reinforcement [polyester], [g/m²]	200	EN 29073-1
Coating asphalt	Styrene butadiene styrene polymer modified bitumen	
Softening point [R&B], [°C]	120 <u>+</u> 10	ASTM D 36
enetration @25°C, [dmm]	15-30	ASTM D 5
ensile strength [L/T], [N/5cm]	900/700	EN 12311-1
longation at break [L/T], [%]	40/50	EN 12311-1
ear strength [L/T], [N]	650/500	ASTM D 5147
Nail tear strenght [L/T], [N]	210/230	EN 12310-1
Resistance to static loading	Static : L ₂₅	EN 12730
Vater absorption, [%]	<0.2	ASTM D 5147
Hydrostatic pressure @5bar	No leakage	BS EN 12390
ow temperature flexibility, [°C]	0 to -10	ASTM D 5147
eat resistance @100°C	No Flow	EN 52123
Dimensional stability, [%]	<1	ASTM D 6164

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bituplus ULTRA E4270

SBS modified bituminous waterproofing membrane

Bituminous waterproofing membrane, modified with SBS polymers for excellent waterproofing and low temperature flexibility properties

CHARACTERISTICS

- ► Polymer rich compound. Easy and strong seal on overlaps.
- ► High flexibility even in low temperature. Easy application on corner details.
- ► High resistance against hydrostatic pressure. Suitable for deep basement applications.
- ► Good dimensional stability under tension.
- ► Excellent adhesion on vertical surfaces. Can be left with protection board for up to 4 weeks before backfilling.
- ► User friendly printed films with stick timer aids easy and correct application.
- ► High mechanical strengths and fatigue resistance properties.









DESCRIPTION

Bituplus ULTRA E4270 is an elastomeric high performance bitumen based torch applied waterproofing membrane. The Bituplus ULTRA range of waterproofing membranes has been developed with special selected components and advanced technologies, in order to offer premium quality and superior features and performance, even under extreme conditions.

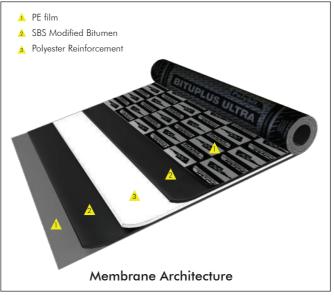
The right blend of the high quality bitumen and polymers, coupled with various reinforcements, provides excellent resistance to high hydrostatic pressure and better flexibility, strength and heat resistance.

In order to offer a superior sealing of the overlap joints, the polyester used as the carrier is positioned in a carefully chosen position, while the innovative enhanced thermofusible film applied on the membrane has clear demarcation lines for proper alignment of the membranes with the recommended overlap area.

With the state-of-the art homogenizing facility, the bitumen compound is enriched on its cohesive links at microscopic level. This simply means a high level close-knit interlocking



between cells and uniform distribution of polymers that result in excellent adhesion of the molten bitumen compound during application, even on vertical surfaces.



For illustration Purpose only

FIELDS OF APPLICATION

Bituplus ULTRA E4270 membrane is typically used for waterproofing / damp proofing of the following areas:

- Building basements
- Pileheads
- Concrete foundations
- Building Footings
- Bridge piers
- Bridge Viaducts
- Underpasses
- Box culverts
- Retaining walls
- Holding tanks & reservoirs

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Priming

Apply Polyprime SB* (Solvent based primer) @ $4-6~m^2/L$ to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel

Fig. 1

A Bitumastic/Polyseal PS
Bituplus ULTRA
Bituboard
Polyprime SB
Plain cement concrete
(PCC)

Angle fillet

Application & Termination details

For illustration Purpose only

to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope laps. Begin membrane application by unrolling the roll of Bituplus ULTRA E4270 membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Bituplus ÜLTRA E4270 membrane is installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the underlying surface.

Caution: Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

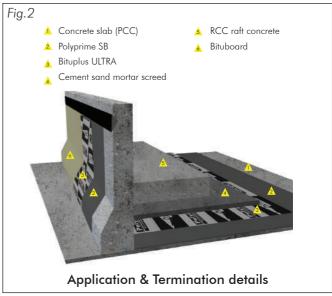
Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Corner Detailings

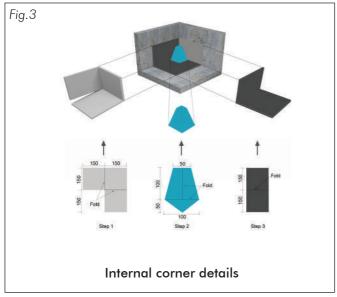
All internal corners shall be provided with an appropriate cement sand angle fillet. External corners shall be chamfered as per the manufacturer's recommendations. Prior to the application of the membrane on all internal and external corners, reinforcement strips shall be laid as per the details provided in Fig.3 & Fig.4.

Protection

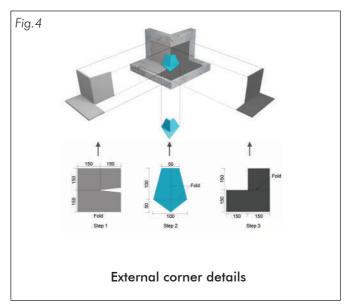
Bituplus ULTRA E4270 membrane shall be protected from getting damaged due to the ongoing site activities



For illustration Purpose only







For illustration Purpose only

and during the backfilling process. Membranes laid on horizontal surfaces can be protected by a cement sand screed (50mm thick). On vertical surfaces the membrane has to be protected with Bituboard. Bituboard can be fixed on the membrane by torching the underside of the board. Please contact our technical service team for specific requirement.

STANDARDS

Bituplus ULTRA E4270 membrane is tested and confirms to the requirements of ASTM and UEAtc 2001 standards.

STORAGE & SHELF LIFE

Bituplus ULTRA E4270 membrane rolls whether loose or on pallets have to be stored vertically in a shaded area, neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus ULTRA E4270 contains a tacky bitumen compound which can stick to human skin during application. Such stains can be removed by using a cloth dipped in a suitable cleaner.

CII	n	n	V
30	P	P	LI

Bituplus ULTRA E4	1270	1m x 10m, wt 41kg#
*Polyprime SB		20L pail & 200L drum
*Bituboard	3.2mm 4.0mm 6.0mm	2m x 1m, wt 7.7kg# 2m x 1m, wt 9.6# 2m x 1m, wt 14.0kg#

^{*}Refer to website for TDS # Approximate weight

PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4.0	EN 1849-1
Mass, [kg/m²]	4.0-4.3	EN 1849-1
Core reinforcement [polyester], [g/m²]	270	EN 29073-1
Coating asphalt	Styrene butadiene styrene polymer modified bitumen	
Softening point [R&B], [°C]	120 <u>+</u> 10	ASTM D 36
Penetration @25°C, [dmm]	15-30	ASTM D 5
Tensile strength [L/T], [N/5cm]	1150/850	EN 12311-1
Elongation at break [L/T],[%]	40/50	EN 12311-1
Tear strength [L/T], [N]	700/600	ASTM D 5147
Nail tear strenght [L/T], [N]	230/250	EN 12310-1
Resistance to static loading	Static : L ₂₅	EN 12730
Water absorption,[%]	<0.2	ASTM D 5147
nydrostatic pressure @5bar	No leakage	BS EN 12390
ow temperature flexibility, [°C]	0 to -10	ASTM D 5147
leat resistance @100°C	No Flow	EN 52123
Dimensional stability, [%]	<1	ASTM D 6164

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $+23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bituplus ULTRA FLEX

SBS modified bituminous waterproofing membrane

Bituminous waterproofing membrane, modified with selected grade of SBS polymers for excellent waterproofing and low temperature (-20°C) flexibility properties

CHARACTERISTICS

- ▶ Remains flexible from -20° C to $+60^{\circ}$ C
- ▶ Very high resistance against hydrostatic pressure
- ► Suitable for applications in deep basements
- ► Easy and strong seal on overlaps
- ► High mechanical strength and fatigue resistance properties
- Excellent adhesion on both horizontal and vertical surfaces
- ► Easy application on corner details
- ► Good dimensional stability under tension









DESCRIPTION

Bituplus ULTRA FLEX is an elastomeric high performance bitumen based torch applied waterproofing membrane. The modified bitumen compound is blended with selected SBS polymers, which allows the membrane to remain flexible at -20 °C. The polymerized bitumen compound is coated onto a high grade and tough polyester reinforcement fleece to make the membrane very strong to withstand all mechanical loads and stresses it is subjected to, even under extreme conditions.

FIELDS OF APPLICATION

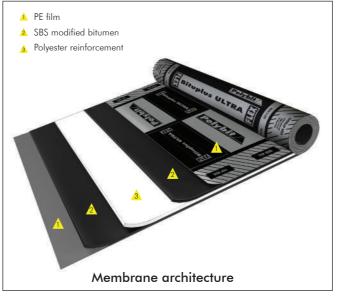
Bituplus ULTRA FLEX membrane is typically used for waterproofing / damp proofing of the following areas:

- building basements
- pileheads
- concrete foundations
- building footings
- bridge piers
- bridge viaducts
- underpasses
- box culverts
- retaining walls
- holding tanks & reservoirs



APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.



For illustration Purpose only

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Apply $\overline{Polyprime}$ SB* (solvent based primer) @ 4- 6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope laps. Begin membrane application by unrolling the roll of Bituplus ULTRA FLEX membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Bituplus ULTRA FLEX membrane is installed by using a cylinder fed propane aas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and

adhered to the underlying surface.

Caution: Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Corner Detailings

All internal corners shall be provided with an appropriate cement sand angle fillet. External corners shall be chamfered as per the manufacturer's recommendations. Prior to the application of the membrane on all internal and external corners, reinforcement strips shall be laid as per the details provided in Fig.3 & Fig.4.

Protection

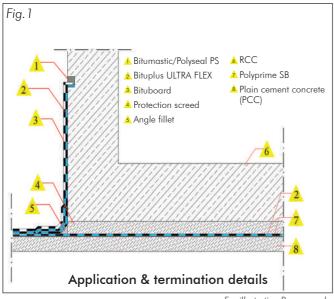
Bituplus ULTRA FLEX membrane shall be protected from getting damaged due to the ongoing site activities and during the backfilling process. Membranes laid on horizontal surfaces can be protected by a cement sand screed (50mm thick). On vertical surfaces the membrane has to be protected with Bituboard. Bituboard can be fixed on the membrane by torching the underside of the board. Please contact our technical service team for specific requirement.

STANDARDS

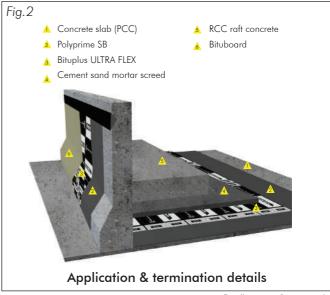
Bituplus ULTRA FLEX membrane is tested and confirms to the requirements of ASTM and UEAtc 2001 standards.

STORAGE & SHELF LIFE

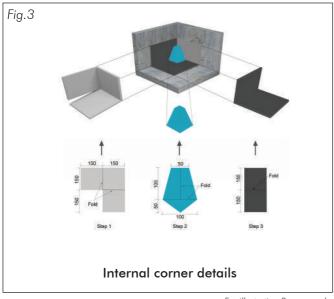
Bituplus ULTRA FLEX membrane rolls whether loose or on pallets have to be stored vertically in a shaded area,



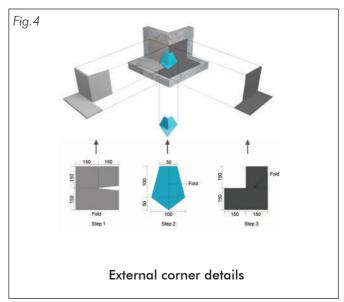
For illustration Purpose only



For illustration Purpose only







For illustration Purpose only

neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus ULTRA FLEX contains a tacky bitumen compound which can stick to human skin during application. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY

Bituplus ULTRA FLEX	(1m x 1	0m, wt 41kg#
*Polyprime SB		20L pail & 200L drum
*Bituboard	3.2mm	2m x 1m, wt 7.7kg#
	4.0mm	2m x 1m, wt 9.6#
	6.0mm	2m x 1m, wt 14.0kg#

^{*}Refer to website for TDS # Approximate weight

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4.0	EN 1849-1
Mass, [kg/m²]	4.1-4.4	EN 1849-1
Core reinforcement [polyester], [g/m²]	200	EN 29073-1
Coating asphalt	Styrene butadiene styrene polymer modified bitumen	
Softening point [R&B], [°C]	>115	ASTM D 36
Penetration @25°C, [dmm]	25-40	ASTM D 5
Tensile strength [L/T], [N/5cm]	900/700	EN 12311-1
Elongation at break [L/T], [%]	40/50	EN 12311-1
Shear resistance @ Joints [L/T], [N]	900/700	EN 12317-1
Tear resistance [L/T], [N]	210/230	EN 12310-1
	600/500	ASTM D 5147
Resistance to static loading	Static: L ₂₅	EN 12730
Resistance to hydrostatic pressure @5bar	Pass	BS EN 12390-8
Water absorption, % [BSP]	<0.2	ASTM D 5147
Heat resistance @100°C	No Flow	EN 52123
Low temperature flexibility, [°C]	-20	ASTM D 5147
Dimensional stability, [%]	<1	ASTM D 6164
Resistance to ageing	No Deterioration	ASTM G 154

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bituplus P

APP modified bituminous waterproofing membrane

Plastomeric membrane with excellent heat & UV resistance and waterproofing properties

CHARACTERISTICS

- ► Excellent resistance to positive water & vapor pressure
- ► Good heat resistance
- ► Good dimensional stability under tension
- ► Can accomodate structural movements because of excellent flexibility
- ► High puncture and fatigue resistance
- ► High tensile and tear strengths
- ► Resistant to water borne chemicals
- Do not contain asbestos, Chromated copper arsenate and lead









DESCRIPTION

Bituplus P membrane is a plastomeric waterproofing membrane, manufactured from a rich mixture of bitumen and selected APP (Atactic Poly Propylene) polymers blended together to obtain excellent heat & UV resistance and waterproofing properties. The polymerized bitumen is coated on to a dimensionally stable reinforcement core of non woven spun bond polyester rot-proof fabric.

FIELDS OF APPLICATION

Bituplus P is used as a waterproofing membrane on the following structures:

- inverted roofs & parapets
- terraces, balconies & patios
- sunken slabs
- bridges & tunnels
- concrete foundations & footings
- basements

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All



surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. The primer promotes the adhesion between the membrane and the concrete surface.

Alignment

start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the lap. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope lap. Begin membrane application by unrolling the roll of Bituplus P membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlap 150mm.

Torching

Bituplus P membranes are installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing

Quality for Professionals

starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the surface

CAUTION: do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be smoothened and pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Up stand

Flashing details are accomplished using cut pieces of Bituplus P membrane in combination with appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane. An appropriate flashing membrane (mineral surface membrane) shall be lapped with the base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete. The grooves will be sealed with a suitable mastic sealant (Bitumastic)*.

STANDARDS

Bituplus P membranes are tested and conform to the requirements of UEAtc 2001 and ASTM standards.

STORAGE & SHELF LIFE

Bituplus P membrane rolls whether loose or on pallets have to be stored vertically in a shaded area neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. Do not stack pallets on top of each other. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus P membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.

	S			P	L		
--	---	--	--	---	---	--	--

Bituplus P	1m x 10m, wt 40kg#
Polyprime SB	20L pail & 200L drum
Bitumastic	20kg pail

[#] Approximate weight

TECHNICAL SP	ECIFICA	NOITA	
PROPERTIES	VALUES		TEST STANDARDS
Product	4180	4200	
Thickness, mm	4.0	4.0	DIN EN 1849-1
Mass per unit area, [kg/m²]	4.0-4.3	4.0-4.3	DIN EN 1849-1
Reinforcement [polyester], [g/m²]	180	200	EN 29073-1
Coating asphalt		atatic poly ie polymei I asphalt	
Softening point [R&B], [°C]		>140	ASTM D 36
Penetration @25°C, [0.1mm]		12-25	ASTM D 5
Tensile strength [L/T], [n/5cm]	800/600	850/650	DIN EN 12311-1
Elongation @Break [L/T], [%]	40/50	40/50	DIN EN 12311-1
Tear resistance (L/T), [N]	160/180 >400/	180/200 >500/	DIN EN 12310-1
	300	400	ASTM D 5147 / D 4073
Resistance to static loading	Static :L ₂		DIN EN 12730
Hydrostatic pressure @5bar [50m]	No leak	age	BS EN 12390 (part 8)
Water absorption [BSP], [%]	< 0.2		ASTM D 5147
Heat resistance @120°C	No flow		DIN EN 52 123
Low temperature flexibility @ 0°C	No crac	k	ASTM D 5147
Dimensional stability, [%]	< 1		ASTM D 6222
VOC [g/L]	<50		ASTM D3960 / D2369
	1 .		

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bituplus ULTRA P4180

APP modified bituminous waterproofing membrane

Plastomeric membrane with excellent heat & UV resistance and waterproofing properties

CHARACTERISTICS

- ► Polymer rich compound. Easy and strong seal on overlaps.
- ► High flexibility. Easy application on corner profiles and detailings.
- ▶ High softening point. Does not leave shoe imprints or makes the bitumen sticky during high temperature applications.
- ► High resistance against hydrostatic pressure.
- ► Good dimensional stability under tension.
- ► User friendly printed films with stick timer aids easy and correct application.
- ► High mechanical strengths and fatigue resistance properties.
- ▶ Does not Contain Asbestos, Chromated copper arsenate and Lead









DESCRIPTION

Bituplus ULTRA P4180 is a plastomeric high performance bitumen based torch applied waterproofing membrane. The Bituplus ULTRA range of waterproofing membranes has been developed with special selected components and advanced technologies, in order to offer premium quality and superior features and performance, even under extreme conditions.

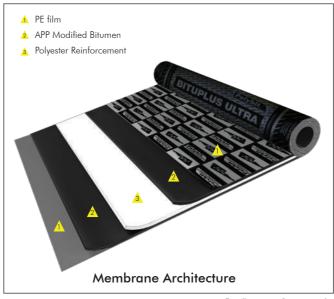
The right blend of the high quality bitumen and polymers, coupled with various reinforcements, provides excellent resistance to high hydrostatic pressure and better flexibility, strength and heat resistance.

In order to offer a superior sealing of the overlap joints, the polyester used as the carrier is positioned in a carefully chosen position, while the innovative enhanced thermofusible film applied on the membrane has clear demarcation lines for proper alignment of the membranes with the recommended overlap area.

With the state-of-the art homogenizing facility, the bitumen



compound is enriched on its cohesive links at microscopic level. This simply means a high level close-knit interlocking between cells and uniform distribution of polymers



For illustration Purpose only

that result in excellent adhesion of the molten bitumen compound during application, even on vertical surfaces.

FIELDS OF APPLICATION

Bituplus ULTRA P4180 is used as a waterproofing membrane on the following structures:

- Inverted roofs & podiums
- Terraces & balconies
- Sunken slabs
- Bridge Piers
- Bridge Viaducts
- Underpasses
- Box culverts
- Concrete foundations
- Building footings
- Retailing walls
- Holding tanks & reservoirs

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Priming

Apply Polyprime SB* (Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Fig. 1 Bitumastic/Polyseal PS Bituplus ULTRA Bituboard Protection screed Angle fillet Application & Termination details

For illustration Purpose only

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the lap. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope lap. Begin membrane application by unrolling the roll of Bituplus ULTRA P4180 membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlap 150mm.

Torching

Bituplus ULTRA P4180 membranes are installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the surface.

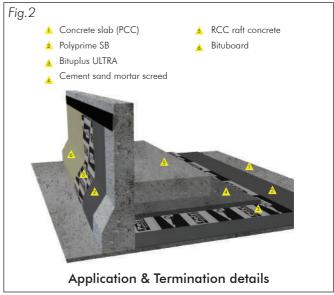
CAUTION: do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

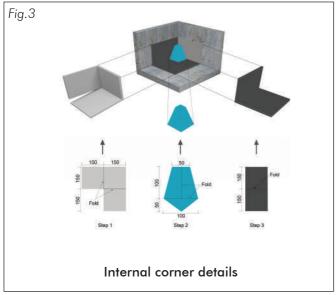
Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be smoothened and pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Corner Detailings

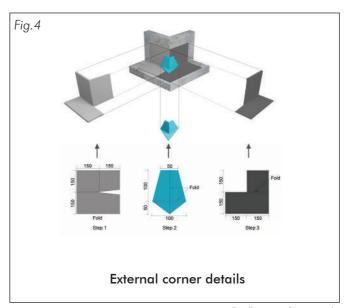
All internal corners shall be provided with an appropriate cement sand angle fillet. Prior to the application of the membrane on all internal and external corners, reinforcement strips shall be laid as per the details provided in Fig.3 & Fig.4.



For illustration Purpose only







For illustration Purpose only

Up stand

Flashing details are accomplished using cut pieces of Bituplus ULTRA P4180 membrane in combination with appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane. An appropriate flashing membrane (mineral surface membrane) shall be lapped with the base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete. The grooves will be sealed with a suitable mastic sealant (Bitumastic)*.

STANDARDS

Bituplus ULTRA P4180 membrane is tested and conform to the requirements of UEAtc 2001 and ASTM standards.

STORAGE & SHELF LIFE

Bituplus ULTRA P4180 membrane rolls whether loose or on pallets have to be stored vertically in a shaded area neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. Do not stack pallets on top of each other. The shelf life is 12 months if stored as per recommendations. Excessive exposure

to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus ULTRA P4180 membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.

C	П	D	D	П	V	7
J	U	г	Г	н	1	

Bituplus ULTRA P4180	1m x 10m, wt 41kg#
Polyprime SB	20L pail & 200L drum
Bitumastic	20kg pail
*Refer to website for TDS	# Approximate weight

PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4.0	EN 1849-1
Mass,[kg/m²]	4.0-4.3	EN 1849-1
Core reinforcement [polyester], [g/m²]	180	EN 29073-1
Coating asphalt	Atactic poly propylene polymer modified bitumen	
Softening point [R&B], [°C]	150 + 10	ASTM D 36
Penetration @25°C, [dmm]	10-25	ASTM D 5
Tensile strength [L/T], [N/5cm]	850/650	EN 12311-1
Elongation at break [L/T], [%]	40/50	EN 12311-1
Tear strength [L/T], [N]	550/400	ASTM D 5147
Nail tear strenght [L/T], [N]	200/220	EN 12310-1
Resistance to static loading	Static : L ₂₅	EN 12730
Water absorption, [%]	<0.2	ASTM D 5147
Hydrostatic pressure @5 bar	No leakage	BS EN 12390
Heat resistance @120°C	No flow	DIN EN 52123
Low temperature flexibility [°C]	0	ASTM D 5147
Dimensional stability, [%]	<1	ASTM D 6164
Resistance to ageing	No deterioration	ASTM G 154

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bituplus ULTRA P4200

APP modified bituminous waterproofing membrane

Plastomeric membrane with excellent heat & UV resistance and waterproofing properties

CHARACTERISTICS

- ▶ Polymer rich compound. Easy and strong seal on overlaps.
- High flexibility. Easy application on corner profiles and detailings.
- ► High softening point. Does not leave shoe imprints or makes the bitumen sticky during high temperature applications.
- ► High resistance against hydrostatic pressure. Suitable for deep basement applications.
- ► Good dimensional stability under tension.
- ▶ User friendly printed films with stick timer aids easy and correct application.
- ► High mechanical strengths and fatigue resistance properties.









DESCRIPTION

Bituplus ULTRA P4200 is a plastomeric high performance bitumen based torch applied waterproofing membrane. The Bituplus ULTRA range of waterproofing membranes has been developed with special selected components and advanced technologies, in order to offer premium quality and superior features and performance, even under extreme conditions.

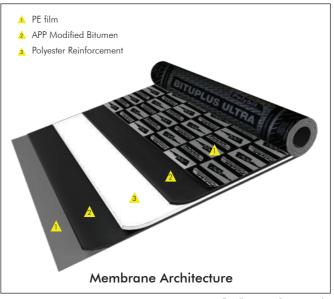
The right blend of the high quality bitumen and polymers, coupled with various reinforcements, provides excellent resistance to high hydrostatic pressure and better flexibility, strength and heat resistance.

In order to offer a superior sealing of the overlap joints, the polyester used as the carrier is positioned in a carefully chosen position, while the innovative enhanced thermofusible film applied on the membrane has clear demarcation lines for proper alignment of the membranes with the recommended overlap area.

With the state-of-the art homogenizing facility, the bitumen compound is enriched on its cohesive links at microscopic level. This simply means a high level close-knit interlocking



between cells and uniform distribution of polymers that result in excellent adhesion of the molten bitumen compound during application, even on vertical surfaces.



For illustration Purpose only

FIELDS OF APPLICATION

Bituplus ULTRA P4200 is used as a waterproofing membrane on the following structures:

- Inverted roofs & podiums
- Terraces & balconies
- Sunken slabs
- Bridge Piers
- Bridge Viaducts
- Underpasses
- Box culverts
- Concrete foundations
- Building footings
- Retailing walls
- Holding tanks & reservoirs

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Priming

Apply Polyprime SB* (Solvent based primer) @ $4-6~m^2/L$ to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel

Fig. 1

Bitumastic/Polyseal PS

Bituplus ULTRA

Bituboard

Protection screed

Angle fillet

Application & Termination details

For illustration Purpose only

to the plies, but never against the lap. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope lap. Begin membrane application by unrolling the roll of Bituplus ULTRA P4200 membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlap 150mm.

Torching

Bituplus ULTRA P4200 membranes are installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the surface.

CAUTION: do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

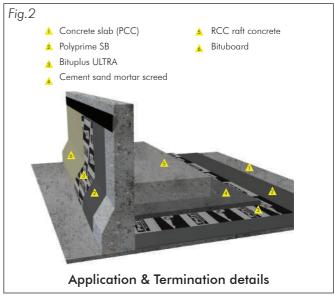
Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be smoothened and pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Corner Detailings

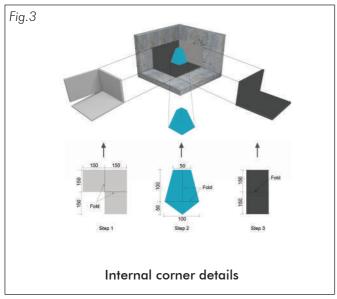
All internal corners shall be provided with an appropriate cement sand angle fillet. Prior to the application of the membrane on all internal and external corners, reinforcement strips shall be laid as per the details provided in Fig.3 & Fig.4.

Up stand

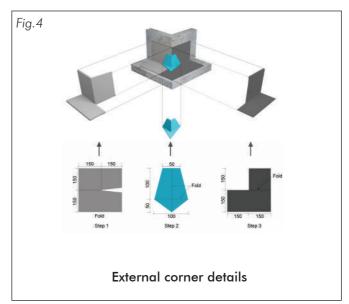
Flashing details are accomplished using cut pieces of Bituplus ULTRA P4200 membrane in combination with



For illustration Purpose only







For illustration Purpose only

appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane. An appropriate flashing membrane (mineral surface membrane) shall be lapped with the base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete. The grooves will be sealed with a suitable mastic sealant (Bitumastic)*.

STANDARDS

Bituplus ULTRA P4200 membrane is tested and conform to the requirements of UEAtc 2001 and ASTM standards.

STORAGE & SHELF LIFE

Bituplus ULTRA P4200 membrane rolls whether loose or on pallets have to be stored vertically in a shaded area neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. Do not stack pallets on top of each other. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus ULTRA P4200 membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY

Bituplus ULTRA P4200	1m x 10m, wt 40kg#
Polyprime SB	20L pail & 200L drum
Bitumastic	20kg pail
*Refer to website for TDS	# Approximate weight

PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4.0	EN 1849-1
Mass,[kg/m²]	4.0-4.3	EN 1849-1
Core reinforcement [polyester], [g/m²]	200	EN 29073-1
Coating asphalt	Atactic poly propylene polymer modified bitumen	
Softening point [R&B], [°C]	150 <u>+</u> 10	ASTM D 36
enetration @25°C, [dmm]	10-25	ASTM D 5
ensile strength [L/T], [N/5cm]	900/700	EN 12311-1
longation at break [L/T], [%]	40/50	EN 12311-1
ear strength [L/T], [N]	650/500	ASTM D 5147
lail tear strenght [L/T], [N]	210/230	EN 12310-1
esistance to static loading	Static : L ₂₅	EN 12730
Vater absorption, [%]	<0.2	ASTM D 5147
lydrostatic pressure @5 bar	No leakage	BS EN 12390
leat resistance @120°C	No flow	DIN EN 52123
ow temperature flexibility [°C]	0	ASTM D 5147
imensional stability, [%]	<1	ASTM D 6164
Resistance to ageing	No deterioration	ASTM G 154

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bituplus ULTRA P4270

APP modified bituminous waterproofing membrane

Plastomeric membrane with excellent heat & UV resistance and waterproofing properties

CHARACTERISTICS

- Polymer rich compound. Easy and strong seal on overlaps.
- ► High flexibility. Easy application on corner profiles and detailings.
- ► High softening point. Does not leave shoe imprints or makes the bitumen sticky during high temperature applications.
- ► High resistance against hydrostatic pressure. Suitable for deep basement applications.
- ► Good dimensional stability under tension.
- ► User friendly printed films with stick timer aids easy and correct application.
- ► High mechanical strengths and fatigue resistance properties.









DESCRIPTION

Bituplus ULTRA P4270 is a plastomeric high performance bitumen based torch applied waterproofing membrane. The Bituplus ULTRA range of waterproofing membranes has been developed with special selected components and advanced technologies, in order to offer premium quality and superior features and performance, even under extreme conditions.

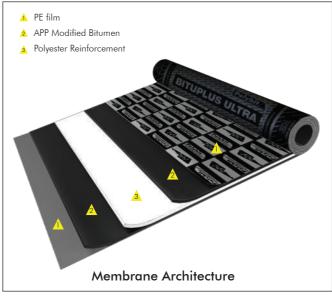
The right blend of the high quality bitumen and polymers, coupled with various reinforcements, provides excellent resistance to high hydrostatic pressure and better flexibility, strength and heat resistance.

In order to offer a superior sealing of the overlap joints, the polyester used as the carrier is positioned in a carefully chosen position, while the innovative enhanced thermofusible film applied on the membrane has clear demarcation lines for proper alignment of the membranes with the recommended overlap area.

With the state-of-the art homogenizing facility, the bitumen compound is enriched on its cohesive links at microscopic



level. This simply means a high level close-knit interlocking between cells and uniform distribution of polymers that result in excellent adhesion of the molten bitumen compound during application, even on vertical surfaces.



For illustration Purpose only

FIELDS OF APPLICATION

Bituplus ULTRA P4270 is used as a waterproofing membrane on the following structures:

- Inverted roofs & podiums
- Terraces & balconies
- Sunken slabs
- Bridge Piers
- Bridge Viaducts
- Underpasses
- Box culverts
- Concrete foundations
- Building footings
- Retailing walls
- Holding tanks & reservoirs

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions.

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired.

Priming

Apply Polyprime SB* (Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel

Fig. 1

Bitumastic/Polyseal PS

Bituplus ULTRA

Bituboard

Protection screed

Angle fillet

Application & Termination details

For illustration Purpose only

to the plies, but never against the lap. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope lap. Begin membrane application by unrolling the roll of Bituplus ULTRA P4270 membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlap 150mm.

Torching

Bituplus ULTRA P4270 membranes are installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. Begin torching the embossed polyethylene side of the rolled portion of the membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the surface.

CAUTION: do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Sealing

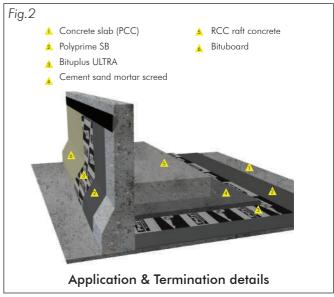
Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be smoothened and pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched.

Corner Detailings

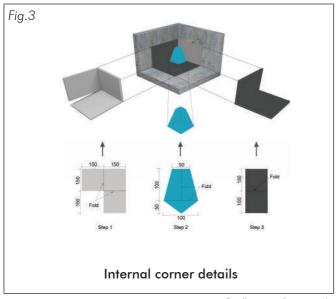
All internal corners shall be provided with an appropriate cement sand angle fillet. Prior to the application of the membrane on all internal and external corners, reinforcement strips shall be laid as per the details provided in Fig.3 & Fig.4.

Up stand

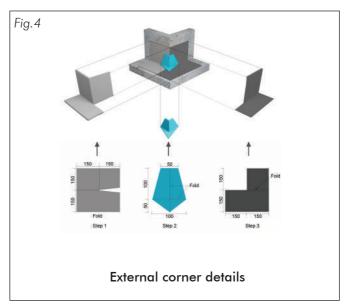
Flashing details are accomplished using cut pieces of Bituplus ULTRA P4270 membrane in combination with



For illustration Purpose only







For illustration Purpose only

appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane. An appropriate flashing membrane (mineral surface membrane) shall be lapped with the base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete. The grooves will be sealed with a suitable mastic sealant (Bitumastic)*.

STANDARDS

Bituplus ULTRA P4270 membrane is tested and conform to the requirements of UEAtc 2001 and ASTM standards.

STORAGE & SHELF LIFE

Bituplus ULTRA P4270 membrane rolls whether loose or on pallets have to be stored vertically in a shaded area neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. Do not stack pallets on top of each other. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bituplus ULTRA P4270 membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner standards.

SUPPLY

Bituplus ULTRA P4270	1m x 10m, wt 41kg#
Polyprime SB	20L pail & 200L drum
Bitumastic	20kg pail
*Refer to website for TDS	# Approximate weight

PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4.0	EN 1849-1
Mass,[kg/m²]	4.0-4.3	EN 1849-1
Core reinforcement [polyester], [g/m²]	270	EN 29073-1
Coating asphalt	Atactic poly propylene polymer modified bitumen	
Softening point [R&B], [°C]	150 <u>+</u> 10	ASTM D 36
Penetration @25°C, [dmm]	10-25	ASTM D 5
ensile strength [L/T], [N/5cm]	1150/850	EN 12311-1
longation at break [L/T], [%]	40/50	EN 12311-1
ear strength [L/T], [N]	700/600	ASTM D 5147
Nail tear strenght [L/T], [N]	230/250	EN 12310-1
Resistance to static loading	Static : L ₂₅	EN 12730
Vater absorption, [%]	<0.2	ASTM D 5147
lydrostatic pressure @5 bar	No leakage	BS EN 12390
leat resistance @120°C	No flow	DIN EN 52123
ow temperature flexibility [°C]	0	ASTM D 5147
imensional stability, [%]	<1	ASTM D 6164
Resistance to ageing	No deterioration	ASTM G 154

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bituplus G 4140

Mineral surfaced bituminous waterproofing membrane

High performance polymer modified membrane, surfaced with reflective slates to provide maximum protection against UV.

CHARACTERISTICS

- ▶ High resistance to positive water & vapor pressure.
- ► Good dimensional stability under tension
- Good flexibility. Can accommodate structural movements
- ► High puncture and fatigue resistance
- ► Resists water borne chemicals
- ► High heat resistance









DESCRIPTION

Bituplus G 4140 is a high performance polymer modified bituminous waterproofing membrane, surfaced with reflective natural color slates to provide maximum protection against UV. The presence of the slates provides a mechanical protection against light foot traffic and occasional maintenance as well as offering an aesthetic surface. It is an ideal membrane for roofing and exposed applications where it can be placed on top of the existing surface and providing an economical and efficient solution to leaking roofs.

FIELDS OF APPLICATION

Bituplus G 4140 membrane is used for waterproofing of exposed areas such as inverted roofs, parapets, terraces, patios, airport aprons & ramp areas.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. application procedures may vary slightly depending upon site conditions. However below given are the general guidelines for the application of the waterproofing system:

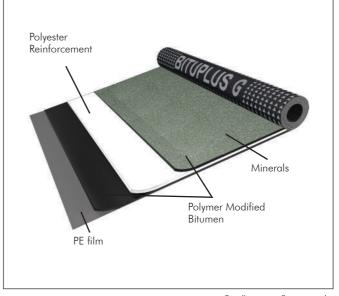
Surface preparation

the surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.



Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it can easily penetrate into the concrete pores and promote the



For illustration Purpose only

Quality for Professionals

adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust particles which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies at the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bituplus G 4140 membrane and aligning the side laps. Re-roll the roll halfway and stand on the unrolled portion to prevent shifting. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Bituplus G 4140 membranes are installed by using a cylinder fed propane gas torch. use of handheld roofing torch is recommended as it affords a good control. if multiple burner torching machines are utilized, care must be taken to ensure the application of uniform heat and avoid overheating of the membrane. Begin torching the embossed polyethylene side of the rolled portion of the membrane. proper torching procedure involves passing the torch flame in an "L" pattern applying about 75 percent of the heat across the coiled portion of the roll and 25 percent across the substrate, including the lap area of the previously installed membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the underlying surface. Subsequent shift of the roll shall be avoided after heating has begun. When complete, the remaining untorched membrane shall be re-rolled and installed in the same manner. When one end is complete, re-roll the opposite end not yet torched,

RCC slab
Aluminum Metal Flashing
Bitumastic/Polyseal PS
Cement Sand Fillet
Bituplus G 4140

and install in the same manner. as subsequent rolls are installed, heat is applied to both the roll and the exposed laps of themembrane being overlapped onto. Be sure to heat the entire roll evenly, not just the lap areas, with extra concentration at the laps. CAUTION: do not over torch as this will expose the reinforcement in the membrane and cause damage to it.

Sealing

heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a uniform bead that oozes from the applied membrane's edges. Excess compound should be smoothened and pressed into the seam using a heated trowel. Any unbonded areas must be lifted and re-torched. Do not attempt to reseal by torching the top surface of the membrane.

Up stand

All angles and abutments should be sealed with extra care to ensure full bonding. Bituplus G 4140 shall be lapped with the base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete.the grooves shall be sealed with a suitable mastic sealant (Bitumastic).

STORAGE & SHELF LIFE

Bituplus G 4140 rolls whether loose or on pallets have to be stored vertically in a shaded area neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. Do not stack pallets on top of each other, the membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduces its shelf life.

SAFETY PRECAUTIONS

Any naked flame should be kept well away from the gas cylinders. When ignited, the torch should be watched at all times. the torch should not be rested on finished roofing. Extreme care should be taken when working near combustible materials or items which might be scorched by the gas flame.

STANDARDS

Bituplus G 4140 membranes are tested and conform to the requirements of UEAtc 2001 and ASTM standards.

HEALTH & SAFETY

Bituplus G 4140 membranes contain a tacky bitumen compound which when applied can stick to human skin. such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY

Bituplus G 4140	1m x 10m, wt 46kg#
Polyprime SB	20L pail & 200L drum
Bitumastic	20kg pail

Approximate weight

3	

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	3.0/4.0	DIN EN 1849-1
Mass per unit area, [kg/m²]	3.4-3.7/ 4.6-4.9	DIN EN 1849-1
Reinforcement [polyester], [g/m²]	140	EN 29073-1
Coating asphalt	Asphalt polymer modified asphalt	
Softening point [R&B], [°C]	>115	ASTM D 36
Penetration @25°C, [0.1mm]	12-22	ASTM D 5
Tensile strength [L/T], [N/5cm]	400/300	DIN EN 12311-1
Elongation @break [L/T], [%]	25/35	DIN EN 12311-1
Shear resistance at joints [L/T], [N/5cm]	400/300	DIN EN 12317-1
Tear resistance [L/T], [N]	130/150 350/300	DIN EN 12310-1 ASTM D 5147
Resistance to static loading	Static : L ₂₅	DIN EN 12730
VOC [g/L]	<50	ASTM D3960 /D2369
All I		

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



Bituplus AR 4000

Polymer modified root inhibiting waterproofing membrane

CHARACTERISTICS

- ► Resistant to root perforations.
- ► Resistant to fertilizers and pesticides.
- ► Resistant to water borne chemicals.
- Suitable for heavy-duty application.
- ► Excellent resistance to puncture.
- ► Exceptional dimensional stability under pressure.
- ► High tolerance to thermal shock.
- ► Impermeable to water and vapor.
- ► Chlorine free







DESCRIPTION

Bituplus AR 4000 is a high performance, polymer modified bituminous membrane additivated with a root inhibiting chemical for resisting the attack of roots, fertilizers and insecticides. This membrane is specifically used for waterproofing of structures in contact with earth in presence of vegetation. Bituplus AR 4000 membranes are made from non-woven polyester which are saturated and coated with a homogenous plasto-elastomeric blend of polymers, distilled bitumen and stabilizers. The mixture is carefully produced under controlled conditions to ensure its stability at high temperatures.

FIELDS OF APPLICATION

- waterproofing of roof gardens, flower containers, underground boxes, and retaining walls.
- waterproofing in soil or growing medium, paving or corner supports, block paving on sand.

APPLICATION

Application procedure may vary slightly depending upon site conditions. However below given are general guidelines.

Surface preparation

The surface where the membrane will be laid is to be made clean and dry. All surface imperfections and protrusions are to be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable repair mortar.



Priming

Apply Polyprime SB @ 4-6 m²/L as per ASTM D 41 to a clean smooth and dry surface by brush, roller or spray. Refer primer data sheet for more details. Allow the primer to dry.

Alignment

Unroll and align Bituplus AR 4000 rolls and re-roll correctly before torching. Overlap should be minimum of 100 mm.

Torching

Use gas burner to heat substrate and underside of Bituplus AR 4000 Embossing on the lower face of the membrane allows a fast and safe laying. When embossing disappears after torching the membrane is ready to stick. Roll forward and press firmly against the substrate to bond. Caution: Do not over torch as this will expose the reinforcement in the membrane and cause damage to it.

Sealina

Heat both the overlaps and use round tipped trowel to seal the overlap. Excess compound should be smoothened and pressed into seam using hot trowel.

Up stand

All angles and abutments should be sealed with extra care to ensure full bondage. Seal the edges well into the grooves and protect with Polyseal PS or any other mastic sealant.

TDS_Bituplus AR_GCC_0720

STANDARDS

Bituplus AR 4000 membranes conform to the requirements of UEAtc MOAT 31-1984, and tested in accordance with UEAtc MOAT 27-1983, ASTM D 5147.

EXPOSED APPLICATIONS

Use Mineral membranes for exposed type applications, flashing details on up-stands and parapets. This type of self-protected membrane is produced with a layer of natural slate flakes embedded on the upper surface. The layer of slate and the positioning of the fiberglass, at below it, provide enhanced protection from UV and retards ageing.

STORAGE

Bituplus AR 4000 should be stored in a clean and covered area. Rolls should not be stacked.

SAFETY PRECAUTION

Any naked flame should be kept away from the gas cylinders. When ignited the torch should be watched at all times. The torch should not be on the finished roofing. Extreme care should be taken when working near combustible materials or items, which might be scorched by the gas flame.

DISPOSAL

Bituplus AR 4000 is non-hazardous, nonflammable and therefore can be disposed into any regular disposal area. However, it should be disposed only after wrapping with paper, plastic or cloth as the modified bitumen has a tendency to soften under heat and pressure which would make further handling very tough.

HEALTH & SAFETY

Bituplus AR 4000 contains a tacky bitumen compound which, while applied can stick to human skin. Such stains can be removed by using a cloth dipped in a light solvent. In case the affected area is a sensitive area it is advised medical attention should be given.

TECHNICAL DATA	4	
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4	DIN EN 1849 -1
Roll length, [m]	10	-
Roll width, [m]	1	-
Unit weight, [kg/m²]	4.0-4.3	DIN EN 1849 -1
Reinforcement		
(polyester), [g/m²]	180	EN 29073 - 1
Coating asphalt	Polymer Modified Asphalt with root inhibiting chemical	-
Softening point, [°C]	>140	ASTM D 36
Penetration, [dmm]	15-25	ASTM D 5
Tensile strength (L/T), [N/5cm]	750/600	DIN EN 12311 - 1
Elongation @ break (L/T), [%]	40/50	DIN EN 12311 - 1
Puncture resistance	Static:L ₂₅	DIN EN 12730
Heat resistance @ 120°C	No Flow	DIN EN 52 123
Tear resistance [L/T], [N]	180/200	DIN EN 12310 - 1
Hydrostatic pressure @ 5 bar [50m]	No leakage	BS EN 12390 (part 8)

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



www.henkelpolybit.com



PLASTIFELT

Fibre reinforced polymer modified bituminous waterproofing membrane

Bituminous waterproofing membrane, manufactured from a mixture of bitumen and selected polymers, which are blended together to obtain excellent waterproofing properties.

CHARACTERISTICS

- ► Excellent resistance to positive water & vapor pressure
- ► Good dimensional stability under tension
- ▶ Good flexibility. Can accommodate structural movements
- ▶ Resistant to water borne chemicals





DESCRIPTION

Plastifelt is a polymer modified bituminous waterproofing membrane, manufactured from a mixture of bitumen and selected polymers, which are blended together to obtain good waterproofing properties. The bitumen compound also exhibits high heat and UV resistance properties. The polymerized bitumen is coated on to a dimensionally stable reinforcement core of non woven glass fibre carrier.

FIELDS OF APPLICATION

Plastifelt is used as waterproofing membrane on the following structures:

- inverted roofs & parapets
- terraces, balconies & patios
- sunken slabs
- bridges & tunnels
- airport aprons & ramp areas

Plastifelt membranes in tropical regions can also be used for waterproofing of below ground concrete structures like:

- concrete foundations & footings.
- basements
- pile heads
- swimming pools & water retaining structures (externally)

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary depending on site conditions. The general recommended guidelines for the application of the waterproofing system is as follows:

Surface preparation

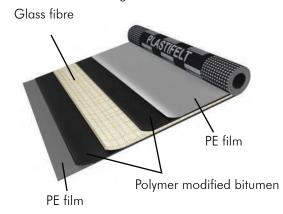
The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound



and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Apply Polyprime SB*(Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust particles which gets accumulated on the concrete surface even after cleaning.



TDS_Plastifelt_RTL_1116

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope laps. Begin membrane application by unrolling the roll of Plastifelt membrane and aligning the side laps.Re-roll the roll halfway and stand on the unrolled portion to prevent shifting. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Plastifelt membranes are installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. If multiple burner torching machines are utilized, care must be taken to ensure the application of uniform heat and avoid overheating the membrane. Begin torching the embossed polyethylene side of the rolled portion of the membrane. Proper torching procedure involves passing the torch flame in an "L" pattern applying about 75 percent of the heat across the coiled portion of the roll and 25 percent across the substrate, including the lap area of the previously installed membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the underlying surface. Subsequent shift of the roll shall be avoided after heating has begun. When complete, the remaining un-torched membrane shall be re-rolled and installed in the same manner. When one end is complete, re-roll the opposite end not yet torched, and install in the same manner. As subsequent rolls are installed, heat is applied to both the roll and the exposed laps of the membrane being overlapped onto. Be sure to heat the entire roll evenly, not just the lap areas, with extra concentration at the laps.

CAUTION:

Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Up stand

Flashing details are accomplished using cut pieces of Plastifelt membrane in combination with appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane. All angles and abutments should be sealed with extra care to ensure full bonding. An appropriate flashing membrane (mineral surface membrane) shall be lapped with the base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete. The grooves will be sealed with a suitable mastic sealant (Bitumastic)*.

Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly like a bead that oozes from the applied membrane's edges. Excess compound should be smoothened and pressed into the seam using a heated trowel. Any unbonded areas must be lifted and re-torched. Do not attempt to reseal by torching the top surface of the membrane.

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	3.0 4.0	DIN EN 1849-1
Mass per unit area, [kg/m²]	3.0-3.3 4.0-4.3	DIN EN 1849-1
Reinforcement (fiber glass), [g/m²]	50	EN 29073-1
Coating asphalt softening point (R&B), [°C] penetration @25°C,[0.1 mm]	Polymer Modified Asphalt >125 12-22	ASTM D 36 ASTM D 5
Tensile strength (L/T), [N/5cm]	300/200	DIN EN 12311-1
Elongation @break, [%]	1.5/1.5	DIN EN 12311-1
Shear resistance @joints (L/T), [N/5cm]	300/200	DIN EN 12317-1
Tear resistance (L/T), [N] Hydrostatic pressure @3 bar (30m)	No leakage	DIN EN 12310-1 BS EN 12390 (part 8)
Water absorption [%], [BSP]	< 0.50	ASTM D 5147
Heat resistance @100°C	no flow	DIN EN 52-123
VOC [g/l]	<50	ASTM D3960 / D2369

All values given are subject to 5-20% tolerance

STANDARDS

Plastifelt conforms to the requirements of UEAtc 2001 and ASTM.

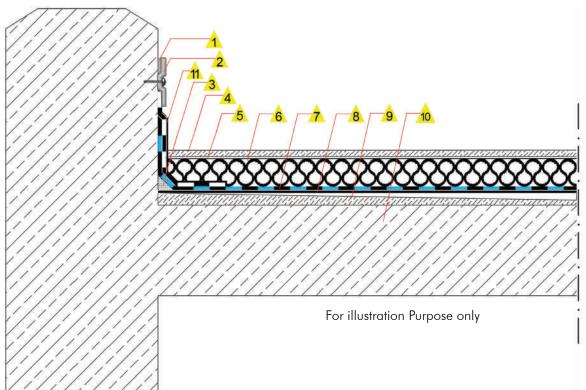
STORAGE & SHELF LIFE

Plastifelt rolls must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membrane shall be protected from all sources of heat. Do not stack pallets on top of each other. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

SAFETY PRECAUTIONS

Any naked flame should be kept well away from the gas cylinders. When ignited the torch should be watched at all times. The torch should not be rested on finished





roofing. Extreme care should be taken when working near combustible materials or items which might be scorched by the gas flame.

HEALTH & SAFETY

Plastifelt membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY		
Plastifelt	3mm 4mm	1m x 10m, wt 30kg# 1m x 10m, wt 40kg#
Polyprime SB		20L pail & 200L drum
Bitumastic		20kg pail

^{*}Refer to website for TDS # Approximate weight

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.







Plastifelt Ultra

APP modified polyester reinforced bituminous waterproofing membrane

Bituminous waterproofing membrane, manufactured from a mixture of bitumen and selected polymers, which are blended together to obtain excellent waterproofing properties.

CHARACTERISTICS

- ► Excellent resistance to positive water & vapor pressure
- ► High durability to ageing and atmospheric agents
- ► Good dimensional stability under tension
- ► Superior flexibility. Accommodates structural movements
- ► Resistant to water borne chemicals attack





DESCRIPTION

Plastifelt Ultra is a polymer modified bituminous waterproofing membrane, manufactured from a mixture of bitumen and selected polymers, which are blended together to obtain good waterproofing properties. The bitumen compound also exhibits high heat and UV resistance properties. The polymerized bitumen is coated on to a dimensionally stable reinforcement polyester.

FIELDS OF APPLICATION

Plastifelt Ultra is used as waterproofing membrane on the following structures:

- inverted roofs & parapets
- terraces, balconies & patios
- sunken slabs

Plastifelt Ultra membranes in tropical regions can also be used for waterproofing of below ground concrete structures like:

- concrete foundations & footings.
- pile heads
- swimming pools & water retaining structures (externally)

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary depending on site conditions. The general recommended guidelines for the application of the waterproofing system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound

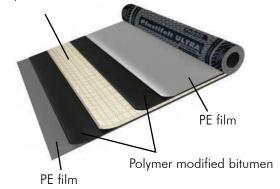


and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Apply Polyprime SB*(Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the

Polyester reinforcement



TDS_Plastifelt Ultra_RTL_0718

dust particles which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Plastifelt Ultra membrane and aligning the side laps.Re-roll the roll halfway and stand on the unrolled portion to prevent shifting. Side overlaps should be a minimum of 100 mm and the end overlaps 150mm.

Torching

Plastifelt Ultra membranes are installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. If multiple burner torching machines are utilized, care must be taken to ensure the application of uniform heat and avoid overheating the membrane. Begin torching the embossed polyethylene side of the rolled portion of the membrane. Proper torching procedure involves passing the torch flame in an "L" pattern applying about 75 percent of the heat across the coiled portion of the roll and 25 percent across the substrate, including the lap area of the previously installed membrane. As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the underlying surface. Subsequent shift of the roll shall be avoided after heating has begun. When complete, the remaining un-torched membrane shall be re-rolled and installed in the same manner. When one end is complete, re-roll the opposite end not yet torched, and install in the same manner. As subsequent rolls are installed, heat is applied to both the roll and the exposed laps of the membrane being overlapped onto. Be sure to heat the entire roll evenly, not just the lap areas, with extra concentration at the laps.

CAUTION:

Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

Up stand

Flashing details are accomplished using cut pieces of Plastifelt Ultra membrane in combination with appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane. All angles and abutments should be sealed with extra care to ensure full bonding. An appropriate flashing membrane (mineral surface membrane) shall be lapped with the base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete. The grooves will be sealed with a suitable mastic sealant (Bitumastic)*.

Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly like a bead that oozes from the applied membrane's edges. Excess compound should be smoothened and pressed into the seam using a heated trowel. Any unbonded areas must be lifted and re-torched. Do not attempt to reseal by torching the top surface of the membrane.

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Thickness, [mm]	4.0	DIN EN 1849-1	
Mass per unit area, [kg/m²]	4.0-4.4	DIN EN 1849-1	
Reinforcement [Polyester], [g/m²]	120	EN 29073-1	
Coating asphalt softening point [R&B], [°C] penetration	Polymer mod >125	ified asphalt ASTM D 36	
@25°C,[0.1mm]	12-22	ASTM D 5	
Tensile strength [L/T], [N/5cm]	500/300	DIN EN 12311-1	
Elongation @break, [%]	30/40	DIN EN 12311-1	
Tear resistance [L/T], [N]	300/200	ASTM D 5147	
Hydrostatic pressure @3 bar [30m]	No leakage	BS EN 12390 (part 8)	
Water absorption [%], [BSP]	< 0.50	ASTM D 570	
Heat resistance @100°C	No flow	DIN EN 52-123	

All values given are subject to 5-20% tolerance

STANDARDS

Plastifelt Ultra conforms to the requirements of UEAtc 2001.

STORAGE & SHELF LIFE

Plastifelt Ultra rolls must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membrane shall be protected from all sources of heat. Do not stack pallets on top of each other. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

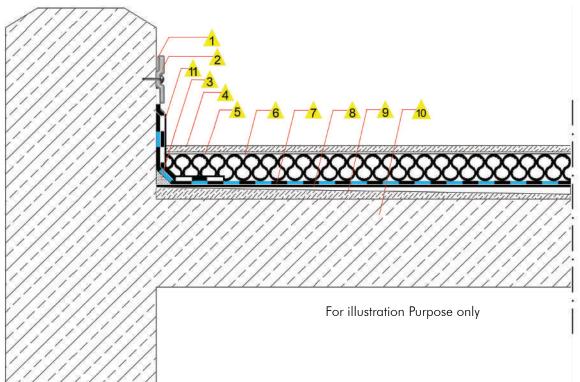
SAFETY PRECAUTIONS

Any naked flame should be kept well away from the gas cylinders. When ignited the torch should be watched at all times. The torch should not be rested on finished roofing. Extreme care should be taken when working near combustible materials or items which might be scorched by the gas flame.

HEALTH & SAFETY

Plastifelt Ultra membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.





SUPPLY		
Plastifelt Ultra	4mm	1m x 10m, wt 40kg#
Polyprime SB		20L pail & 200L drum
Bitumastic		20kg pail

Approximate weight

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.







Easyfelt P4160

Oxidized bituminous waterproofing membrane

CHARACTERISTICS

- ► Excellent resistance to positive water & vapor pressure
- ► Good dimensional stability under tension
- Resistant to water borne chemicals
- ► Excellent tensile, tear and puncture resistance





DESCRIPTION

Easyfelt P4160 is a polyester reinforced bituminous waterproofing membrane, manufactured from a mixture of oxidized bitumen. The bituminous compound exhibits high heat and UV stability.

FIELDS OF APPLICATION

Easyfelt P4160 is designed to be used for villas & small buildings for the following areas:

- inverted roofs & terraces
- balconies & patios

APPLICATION

Surface preparation

The Clean all surfaces thoroughly of all contaminants like dust, traces of curing compound, oil, grease.

Priming

Apply Polyprime SB (Solvent based primer) @ 4-6 m²/L by brush, roller or spray. Allow the primer to dry prior to the application of the membrane.

Application

Easyfelt P4160 membranes are installed by using a cylinder fed propane gas torch. Heat is applied to both the roll and the exposed laps of the membrane being overlapped onto. Caution: Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

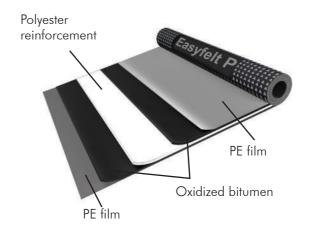
Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap.



Up stand

An appropriate flashing membrane (Bituplus G) shall be lapped with the base membrane and taken up on the parapet wall and tucked into a groove cut into the concrete. The grooves will be sealed with a suitable mastic.



For illustration Purpose only

Quality for Professionals

STORAGE

Easyfelt P4160 membranes have to be stored vertically in a covered area and protected from UV and sunlight and should not be stacked on top of one another.

HEALTH & SAFETY

Easyfelt P4160 membranes contain a tacky bitumen compound which when applied can stick to human skin. Such stains can be removed by using a cloth dipped in suitable cleaner. In case the bitumen gets stuck to a sensitive area it is advised to get medical attention.

SUPPLY		
Easyfelt P4160	4mm	1x10 m, wt. ∼50 kg
Polyprime SB		15L & 20L

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES		
Thickness, [mm]	4.0		
Mass per unit area, [kg/m²]	4.8-5.2		
Coating asphalt	Oxidized Asphalt		
Softening point [R&B], [°C]	>105		
Penetration at 25°C, 0.1mm	10-20		
Tensile strength [L/T], [N/5cm]	≥ 500/350		
Elongation [L/T], [%]	≥ 30/40		
Tear strength [L/T], [N]	≥ 300/250		
Heat resistance at 70°C	No Flow		

All values given are subjected to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Bitustick

Self adhesive bituminous waterproofing membrane

HDPE surfaced polymer modified bituminous sheet membrane

CHARACTERISTICS

- ► Cold applied, self adhesive and easy to apply
- ► Excellent adhesion to vertical and horizontal surfaces
- Excellent resistance to chlorides, sulphates, dilute alkalis and acids
- ► Good tear and puncture resistance
- ► Water and vapor proof
- Does not Contain Asbestos, Chromated copper arsenate and Lead









DESCRIPTION

Bitustick is a self adhesive polymer modified bituminous, waterproofing sheet membrane, laminated onto a tough HDPE film on one side and a silicone release film on the other. Bitustick conforms to the requirements of BS 8102

FIELDS OF APPLICATION

Bitustick is used as waterproofing or dampproofing membrane intended for concrete protection. It may be used for horizontal and vertical application for tanking below ground structures, subways and retaining walls.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Apply Polyprime SB* (Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the



adhesion between the membrane and the concrete surface. In addition, the primer also acts as a binder for the dust which gets accumulated on the surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bitustick membrane and aligning the side laps.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges with a wooden press in order to remove any entrapped air. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with the base surface. Side overlaps shall be a minimum of 50mm on the selvedge and end overlaps 100mm.

Protection

The membrane shall be protected from damage due to ongoing site activities or from aggregates during backfilling

TDS_Bitustick_GCC_082

by a tough, weather, warp and rot proof asphaltic protection board (Bituboard / Bitustick R300/ Bitustick R400)*. Alternatively, on horizontal areas the membrane can also be protected by laying a cement sand screed (50mm). BITUBOARD can be fixed with a double sided adhesive bitumen tape (Watertite TS 15)*.

HANDLING

Bitustick membranes are packed in loose corrugated boxes to avoid any damage during transit or during storage at sites. Care should be taken when storing the membranes on sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membrane shall be protected from all sources of heat. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bitustick contains a tacky bitumen compound which can stick to human skin during application. Bitumen stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY Bitustick 1m x 10m, wt 16kg# 1.5 mm 1m x 20m, wt 32kg# 2.0 mm 1m x 10m, wt 21kg# 1m x 15m, wt 31kg# Polyprime SB 20L pail & 200L drum Bituboard 3.2mm 2m x 1m, wt 7.7kg# 3.5 mm 2m x 1m, wt 8.4kg# 4.0 mm 2m x 1m, wt 9.6kg# 6.0 mm 2m x 1m, wt 14.0kg# Bitustick R300 1m x 10m 27kg# Bitustick R400 1m x 8m 22kg# Watertite TS 15 50mm x10m, wt 0.6kg# Wooden press 140mm x 210mm Iron roller Head Dia 38mm, Wt 1.5kg# Width 100mm (recommended Length 350mm specification)

TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARDS		
Thickness, [mm]	1.5 / 2.0	DIN EN 1849-1		
Mass per unit area, [kg/m²]	1.6 / 2.1	DIN EN 1849-1		
Top surfacing	HDPE film	-		
Softening point [R&B], [°C]	>105	ASTM D 36		
Tensile strength, [Film] [N/mm ²]	Long 20 Trans 20	ASTM D 882		
Elongation@break, [Film], [%]	Long 300 Trans 300	ASTM D 882		
Tear strength, [Film] [N/mm]	Long 120 Trans 110	ASTM D 1004		
Adhesion strength, [N/mm]		ASTM D 1000		
Primed substrate Self	1.8 2.2			
Puncture resistance, [N]	>180	ASTM E 154		
Hydrostatic pressure @5bar [50m]	No leakage	BS EN 12390 (Part 8)		
Water absorption, [Film], [%]@24 hrs	0.14	ASTM D 570		
Chemical resistance [pH]	2.5 -11.5	ASTM D 543		
Low temperature flexibility, [°C]	<-15	ASTM D 1970		
Crack bridging ability, [mm]	> 1	ASTM C 836		
VOC, [g/L]	<50	ASTM D3960/D2369		

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



[#] Approximate weight

BITUSTICK 15

HDPE surfaced bituminous waterproofing membrane

Self adhesive polymer modified bituminous sheet membrane, laminated onto a tough HDPE film

CHARACTERISTICS

- ► Cold applied, self adhesive and easy to apply
- ► Excellent adhesion to vertical and horizontal surfaces
- Excellent resistance to chlorides, sulphates, dilute alkalis and acids
- ► Good tear and puncture resistance
- ► Water and vapor proof







DESCRIPTION

Bitustick 15 is a self adhesive polymer modified bituminous, waterproofing sheet membrane, laminated onto a tough HDPE film on one side and a silicone release film on the other. Bitustick 15 conforms to the requirements of BS 8102.

FIELDS O F APPLICATION

Bitustick 15 is used as waterproofing or dampproofing membrane intended for concrete protection. It may be used for horizontal and vertical application for tanking below ground structures, subways and retaining walls.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Apply Polyprime SB* (Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores



which promotes the adhesion between the membrane and the concrete surface. In addition, the primer also acts as a binder for the dust which gets accumulated on the surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope laps. Begin membrane application by unrolling the roll of Bitustick 15 membrane and aligning the side laps.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges with a wooden press in order to remove any entrapped air. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with the base surface. Side overlaps shall be a minimum of 50mm on the selvedge and end overlaps 100mm.

TDS_Bitustick 15_RTL_1116

Protection

The membrane shall be protected from damage due to ongoing site activities or from aggregates during backfilling by a tough, weather, warp and rot proof asphaltic protection board (Bituboard)*. Alternatively, on horizontal areas the membrane can also be protected by laying a cement sand screed (50mm). Bituboard can be fixed with a double sided adhesive bitumen tape (Bitutape TS)*.

HANDLING

Bitustick 15 membranes are packed in loose corrugated boxes to avoid any damage during transit or during storage at sites. Care should be taken when storing the membranes on sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick 15 membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membrane shall be protected from all sources of heat. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bitustick 15 contains a tacky bitumen compound which can stick to human skin during application. Bitumen stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY			
Bitustick 15	1.5 mm	1m x 10m, wt 16kg# 1m x 20m, wt 32kg#	
	2.0 mm	1m x 10m, wt 21kg#	
		1m x 15m, wt 31kg#	
Polyprime SB		20L pail & 200L drum	
Bituboard	3.2mm	2m x 1m, wt 7.7kg#	
	3.5 mm	2m x 1m, wt 8.4kg#	
	4.0 mm	2m x 1m, wt 9.6kg#	
	6.0 mm	2m x 1m, wt 14.0kg#	
Bitutape TS		50mm x10m, wt 0.6kg#	
Wooden press		140mm x 210mm	
Iron roller		Head dia 38mm,	
(recommended		wt 1.5kg#	
specification)		Width 100mm	
		Length 350mm	
*Refer to website for TDS # Approximate weight			

TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARDS		
Thickness, [mm]	1.5 2.0	DIN EN 1849-1		
Mass per unit area, [kg/m²]	1.6 2.1	DIN EN 1849-1		
Top surfacing	HDPE film	-		
Softening point (R&B), [°C]	>105	ASTM D 36		
Tensile strength, [Film] [N/mm²]	Long 20 Trans 20	ASTM D 882		
Elongation@break, [Film] [%]	Long 300 Trans 300	ASTM D 882		
Tear strength, [Film] [N/mm]	Long 120 Trans 110	ASTM D 1004		
Adhesion strength, [N/mm] Primed substrate Self	1.8 2.2	ASTM D 1000		
Puncture resistance, [N]	>180	ASTM E 154		
Hydrostatic pressure @5bar (50m)	No leakage	BS EN 12390 (Part 8)		
Water absorption, [Film] [%]@24 hrs	0.14	ASTM d 570		
Chemical resistance [pH]	2.5 -11.5	ASTM D 543		
Low temperature flexibility [°C]	<-15	ASTM D 1970		
Crack bridging ability, [mm]	> 1	ASTM C 836		
All I	1			

CUNICAL SPECIFICATION

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Bituminous self adhesive waterproofing membrane

1mm thick preformed self adhesive modified bituminous membrane specifically designed for waterproofing and damp proofing of below ground concrete structures.

CHARACTERISTICS

- ▶ Preformed thickness. Ensures application of a minimum and uniform thick membrane.
- Easy and fast application. Same day screeding or backfilling.
- ► Seamless adhesion on overlaps.
- Resistant to chlorides, sulphates, dilute alkalis and acids.
- ► Good crack bridging ability.
- ► Good tear and puncture resistance.
- Good resistance to hydrostatic pressure.
- ► Effective sealing of pin holes & blow holes.









DESCRIPTION

Bitustick 1000 is a 1mm thick preformed self adhesive modified bituminous membrane specifically designed for waterproofing and damp proofing of below ground concrete structures where the ground water table is low. Bitustick 1000 conforms to the requirements of BS 8102.

FIELDS OF APPLICATION

- footings & foundations of villas and shallow rafts
- retaining walls
- manholes

APPLICATION INSTRUCTIONS

Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing system are as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections and protrusions are to be removed and repaired.

Primina

Apply Polyprime SB* (Solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane.



Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bitustick 1000 membrane and aligning the side laps. Re-roll the roll halfway and stand on the unrolled portion to prevent shifting.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen out the membrane from the center to the edges in order to drive out entrapped air with a wooden press. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with base surface. Side overlaps shall be a minimum of 50mm on the selvedge and end overlaps 100mm.

Protection

Though the membrane has good impact, puncture and abrasion resistance, for areas where there are high concentration of coarse and sharp backfill aggregates, it TDS_Bitustick 1000_GCC_0519

is highly recommended to protect the membrane with a tough, weather, warp and rot proof asphaltic protection board (Bituboard*).

Bituboard can be fixed with a double sided adhesive bitumen tape (Watertite TS 15). Alternatively a 1000 gauge polyethylene sheet can be used for protecting the membrane.

STORAGE

Bitustick 1000 membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight.

The membranes at site should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

HEALTH AND SAFETY

Bitustick 1000 contains a tacky bitumen compound and during application can stick to human skin. Bitumen stains can be removed by using a cloth dipped in a suitable cleaner. In case the affected area is sensitive, like the eye, please seek medical advice.

SUPPLY	7	
Bitustick 10	000	1m x 15mx1.2mm 21.0 kg#
Polyprime S	SB	20L & 200L
Bituboard	3.2 mm 6.0 mm	2m x 1m, wt 7.7kg# 2m x 1m, wt 14.0kg#
Watertite T	S 15	50mm x 10m, wt 0.6kg#
Wooden pr	ress	140mm x 210mm
Iron Roller (recommer specification		Head dia 38mm, wt 1.5kg# Width 100mm Length 350mm

[#] Approximate weight

TECHNICAL SPECIFICA	TION	
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	1, 1.2mm	-
Mass per unit area, [kg/m²]	1.1	-
Top surfacing	PE film	-
Softening Point [R&B], [°C]	100	-
Tensile strength, [N/mm²]		
membrane	≥1	
film	≥20	ASTM D 882
Elongation at break, [%]	>500	ASTM D 882
Adhesion strength, [N/mm]	>0.5	ASTM D 1000
Puncture resistance, [N]	>30	ASTM B 154
Hydrostatic water pressure		
@3bar	Nil	BS EN 12390
Water vapor transmission, [g/m²/24 hrs]	<0.1	ASTM B 96
Resistance against chloride		
and sulphate ions	Resistant	ASTM D 543
Low temperature flexibility,		
[°C]	≤-15	ASTM D 5147
Crack bridging ability, [mm]	>1	ASTM C 836
Application temperature, [°C]	+5 to $+55$	-
Service temperature, [°C]	+4 to +80	-
VOC [g/L]	<50	ASTM D3960/ D2369

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

Bifusfick P

Polyester reinforced waterproofing membrane

Polymer modified bituminous self adhesive waterproofing membrane



CHARACTERISTICS

- Excellent adhesion to vertical and horizontal surfaces
- ► High tensile and tear strengths
- ► Provides protection against water and vapor
- Excellent resistance to chlorides, sulphates, alkalis and
- ► Good puncture resistance
- Self adhesive. Requires peeling off the silicone film and applying to the surface
- Does not Contain Asbestos, Chromated copper arsenate and Lead









DESCRIPTION

Bitustick P is a polymer modified bitumen self adhesive waterproofing membrane. The modified bitumen compound is coated on to a dimensionally stable reinforcement core of a non woven polyester rot-proof fabric. The membrane has excellent tensile & tear strengths and is highly resistant to puncture. Bitustick P complies with the requirements of BS 8102.

FIELDS OF APPLICATION

Bitustick P is used for waterproofing or dampproofing of concrete structures. It can be used in both horizontal and vertical applications for tanking below ground structures, subways and retaining walls.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.



Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to a clean, smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that, the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bitustick P membrane and aligning the side laps.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges in order to drive out entrapped air with a wooden press. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong

TDS_Bitustick P_GCC_0525

adhesion of the bitumen compound with base surface. Side overlaps shall be a minimum of 50mm on the selvedge and end overlaps 100mm.

Protection

The membrane shall be protected from damage due to ongoing site activities or from aggregates during backfilling by a tough, weather, warp and rot proof asphaltic board (Bituboard / Bitustick R300/ Bitustick R400)*. Alternatively, in horizontal areas the membrane can also be protected by laying a cement sand screed (50mm). Bituboard can be fixed with a double sided adhesive bitumen tape (Watertite TS 15)* or Bitubond N.

HANDLING

Bitustick P membranes are packed in loose corrugated boxes to avoid any damage during transit or during storage at sites. Care should be taken when storing the membranes at sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick P membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membrane shall be protected from all sources of heat. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bitustick P contains a tacky bitumen compound and during application can adhere to human skin. Bitumen stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY		
Bitustick P	1.6 mm 1m x 10m, 1.5 mm 1m x 20m, 2.0 mm 1m x 10m,	wt 16kg# wt 32kg# wt 21kg#
Polyprime SB	20L pail & 200L drum	
Bituboard	3.2 mm 2m x 1m 6.0 mm 2m x 1m	wt 7.7kg# wt 14.0kg#
Bitustick R300	1m x 10m	27kg#
Bitustick R400	1m x 8m	22kg#
Watertite TS 15	50mm x10m	wt 0.6kg#
Wooden press	140mm x 210mm	
Iron roller (recommended specification)	Head dia 38mm Width 100mm Length 350mm	wt 1.5kg#

[#] Approximate weight

TECHNICAL SPEC	CIFICATION	
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	1.6, 2.0	DIN EN 1849-1
Mass per unit area, [kg/m²]	1.6, 2.1	DIN EN 1849-1
Reinforcement [g/m²], (Polyester)	140	EN 29073-1
Softening point, [°C]	>105	ASTM D 36
Tensile strength [L/T], [N/5cm]	300/250	DIN EN 12311-1
Elongation [membrane] [L/T], [%]	30/35	DIN EN 12311-1
Elongation [film], [%]	>250	ASTM D 638
Puncture resistance, [N]	>400	ASTM E 154
Tear resistance [L/T], [N]	340/310	ASTM D 5147
Adhesion strength, [N/mm]		
To primed substrate To self	1.8 2.2	ASTM D 1000
Hydrostatic pressure @ 5bar [50m]	No leakage	BS EN 12390 (Part 8)
Crack bridging ability, [mm]	>1	ASTM C 836
Chemical resistance [pH]	2.5 -11.5	ASTM D 543
VOC [g/l]	<50	ASTM D3960/ D2369

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Bitustick XL

Cross laminated waterproofing membrane

Polymer modified bituminous self adhesive waterproofing membrane



CHARACTERISTICS

- ► Specially formulated for tropical climate grade
- ► Provides protection against water and vapor
- ► Self adhesive. Requires just peeling off the silicone film and sticking to the surface
- ► Excellent adhesion to vertical and horizontal surfaces
- Excellent resistance to chlorides, sulphates, alkalis and acids
- ► Good tear and puncture resistance
- ► Excellent tensile strength
- Does not Contain Asbestos, Chromated copper arsenate and Lead









DESCRIPTION

Bitustick XL is a self adhesive waterproofing membrane based on a tropical grade of polymer modified bitumen. The bitumen compound is laminated onto an impervious, non-perforated, cross laminated HDPE film. Bitustick XL conforms to the requirements of BS 8102 and ASTM D 7832.

FIELDS OF APPLICATION

Bitustick XL is used as waterproofing and damp proofing membrane intended for concrete protection. It may be used for horizontal and vertical application for tanking below ground structures, subways and retaining walls.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing system is as follows:

Surface preparation

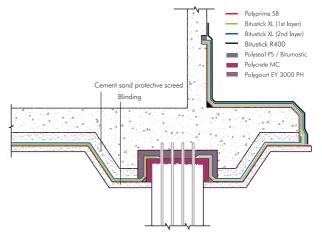
The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray.



Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.



For illustration Purpose only

Quality for Professionals

Alignment

Start the installation of all membrane plies from the low point or drains, so that the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope laps. Begin membrane application by unrolling the roll of Bitustick XL membrane and aligning the side laps.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges with a wooden press in order to remove entrapped air. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with the base surface. Side overlaps shall be a minimum of 50mm on the selvedge and end overlaps 100mm.

Protection

The membrane shall be protected immediately after application from damage, due to ongoing site activities or from sharp aggregates during backfilling by a tough, weather, warp and rot proof asphaltic protection board (Bituboard / Bitustick R300/ Bitustick R400)*. Alternatively, on horizontal areas the membrane can also be protected by laying a cement sand screed (50mm). Bituboard can be fixed with a double sided adhesive bitumen tape (Bitutape TS)*.

HANDLING

Bitustick XL membranes are packed in loose corrugated boxes to avoid any damage during transit or during storage at sites. Care should be taken when storing the membranes at sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick XL membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The membrane shall be protected from all sources of heat. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

SUPPLY			
Bitustick XL	1.6 mm 2.1 mm	1m x 10m 1m x 10m	wt 16kg# wt 21kg#
Polyprime SB		20L pail & 20	OOL drum
Bituboard	3.2 mm 3.5 mm 4.0 mm 6.0 mm	2m x 1m 2m x 1m 2m x 1m 2m x 1m	wt 7.7kg# wt 8.4kg# wt 9.6kg# wt 14.0kg#
Bitustick R300	1m x 10m	27kg#	
Bitustick R400	1m x 8m	22kg#	
Bitutape TS 50n		50mm x10m	wt 0.6kg#
Woodenpress	Woodenpress 140mm x 210mm		0mm
Iron Roller (recommended specification)		Head dia 38mm Wt 1.5kg# Width 100mm Length 350mm	
# Approximate	woight		

[#] Approximate weight

HEALTH & SAFETY

Bitustick XL contains a tacky bitumen compound and during application can adhere to human skin. Bitumen stains can be removed by using a cloth dipped in a suitable cleaner.

TECHNICAL SPECIF	ICATION	
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	1.6 / 2.1	DIN EN 1849-1
Mass per unit area, [kg/m²]	1.6 / 2.1	DIN EN 1849-1
Top surfacing	Cross laminated HDPE film	-
Softening point (R&B), [°C]	>105	ASTM D 36
Tensile strength, [Film] [N/mm²]	Long 42 Trans 48	ASTM D 638/882
Elongation [Film], [%]	Long 230 Trans 180	ASTM D 638/882
Tear strength [Film], [N/mm]	Long 340 Trans 310	ASTM D 1004
Adhesion strength, primed substrate [N/mm] self [N/mm]	2.0 2.2	ASTM D 1000
Puncture resistance,[N]	>225	ASTM E 154
Hydrostatic pressure @7bar (70m)	No leakage	BS EN 12390 (Part 8)
Water absorption, [Film] [%] @24hrs	<0.14	ASTM D 570
Water vapor trans- mission, [g/m²/24hrs]	<0.1	ASTM E 96
Chemical resistance [pH]	2.5 -11.5	ASTM D 543
Low temp flexibility,	≤-15°C	ASTM D 1970
Crack bridging ability,	>1.5mm	ASTM C 836
VOC [g/l]	<50	ASTM D 3960/ D 2369

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based

well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



Henkel Polybit Industries Ltd.; PO Box: 293, Umm Al Quwain, UAE



Bitustick XLS

Solar reflective white cross laminated waterproofing membrane

Polymer modified bituminous self adhesive waterproofing membrane

BBA APPROVAL INSPECTION TESTINGATION CERTIFICATION

CHARACTERISTICS

- ► Can be left exposed temporarily without losing its adhesion and prevents formation of bubbles
- ► Cold applied, self-adhesive and easy to apply.
- ► Excellent adhesion to vertical and horizontal surfaces
- Excellent resistance to chlorides, sulphates, alkalis and acids
- ► Excellent tear and tensile strength
- ➤ Significant reduction in surface temperature over standard black membrane
- ► Self sealing / healing property against minor punctures









DESCRIPTION

Bitustick XLS is a solar reflective self adhesive waterproofing membrane manufactured out of a tropical grade of polymer modified bitumen. The bitumen compound is laminated onto a white solar reflective, cross laminated HDPE film. Bitustick XLS conforms to the requirements of BS 8102.

FIELDS OF APPLICATION

- concrete foundations & footings
- basements
- pile heads
- swimming pools & water retaining structures (externally)
- subways and retaining walls
- inverted roofs & parapets
- terraces, balconies & patios
- sunken slabs

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing system is as follows:

Surface Preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound



and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bitustick XLS membrane and aligning the side laps. Re-roll the roll halfway and stand on the unrolled portion to prevent shifting.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface.

TDS_Bitustick XLS_GCC_0420

Smoothen the membrane from the center to the edges in order to drive out entrapped air with a wooden press. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with base surface. Side overlaps shall be a minimum of 50mm on the selvedge and end overlaps 100mm.

Protection

Due to its white reflective film, the applied membrane can be left exposed for a maximum period of 7 days, after which it has to protected with a tough, weather, warp and rot proof asphaltic protection board (Bituboard / Bitustick R300/ Bitustick R400)* to prevent any damage from backfilling and mechanical damage. Alternatively, on horizontal areas the membrane can also be protected by laying a cement sand screed (50mm). Bituboard can be fixed with a double sided adhesive bitumen tape (Watertite TS 15)* or Bitubond N.

HANDLING

Bitustick XLS membranes are packed in loose corrugated boxes to avoid any damage during transit or during storage at sites. Care should be taken when storing the membranes at sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick XLS membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The membrane shall be protected from all sources of heat. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bitustick XLS contains a tacky bitumen compound and during application can adhere to human skin. Bitumen stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY		
Bitustick XLS	1.6 mm 1m x 10m 2.1 mm 1m x 10m	wt 16kg# wt 21kg#
Polyprime SB	20L pail & 200L drum	
Bituboard	3.2 mm 2m x 1m 6.0 mm 2m x 1m	wt 7.7kg# wt 14.0kg#
Bitustick R300	1m x 10m	27kg#
Bitustick R400	1m x 8m	22kg#
Watertite TS 15	50mm x10m	wt 0.6kg#
Wooden Press	140mm x 210mm	
Iron Roller (recommended specification)	Head dia 38mm Width 100mm Length 350mm	wt 1.5kg#

[#] Approximate weight

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	1.6, 2.1	DIN EN 1849-1
Mass per unit area, [kg/m²]	1.6, 2.1	DIN EN 1849-1
Color [backing film]	White	-
Softening point (R&B),	>105°C	ASTM D 36
Tensile strength [Film], [N/mm²]	Long 49 Trans 46	ASTM D 882
Elongation [Film], [%]	Long 210 Trans 160	ASTM D 882
Tear strength [Film], [N/mm]	Long 280 Trans 280	ASTM D 1004
Adhesion strength, [N/ To primed substrate To self	mm] 1.8 2.2	ASTM D 1000
Puncture resistance,[N]	280	ASTM E 154
Solar reflectance, [%]	>80	EN 410
Water absorption, [Film][%] @ 24 hrs	<0.14	ASTM D 570
Chemical resistance [pH]	2.5 -11.5	ASTM D 543
Cold temp flexibility,	<-15 °C	ASTM D 1970
Crack bridging ability,	1.5 mm	ASTM C 836
Hydrostatic pressure @ 7bar (70m)	No leakage	BS EN 12390 (Part 8)
VOC [g/l]	<50	ASTM D 3960/ D 2369

All values given are subject to 5 -10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



itustick X

Fibre reinforced waterproofing membrane

Polymer modified bituminous self adhesive waterproofing membrane

CHARACTERISTICS

- Excellent adhesion to vertical and horizontal surfaces
- ▶ Provides protection against water and vapor
- ▶ Excellent resistance to chlorides, sulphates, alkalis and acids
- ► Good tear and puncture resistance
- Self adhesive. Requires peeling off the silicone film and applying on the surface
- ► Dimensionally stable









DESCRIPTION

Bitustick XLR is a polymer modified bitumen, self adhesive waterproofing membrane, reinforced with a dimensionally stable, rot resistant tough glass fibre carrier. Bitustick XLR conforms to the requirements of BS 8102.

FIELDS OF APPLICATION

Bitustick XLR is used for waterproofing and damp proofing of concrete structures. It can be used for both horizontal and vertical applications and for tanking below ground structures, subways and retaining walls.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the



TDS_Bitustick XLR_GCC_0420

membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion beween the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust particles which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bitustick XLR membrane and aligning the side laps.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges in order to drive out entrapped air with a wooden press. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with the base surface. Side overlaps shall be a minimum of 50mm on the selvedge and end overlaps 100mm.

Quality for Professionals

Protection

The membrane shall be protected from damage due to ongoing site activities or from aggregates during backfilling by a tough, weather, warp and rot proof asphaltic board (Bituboard / Bitustick R300/ Bitustick R400)*. Alternatively, in horizontal areas the membrane can also be protected by laying a cement sand screed (50mm). Bituboard can be fixed with a double sided adhesive bitumen tape (Watertite TS)* or Bitubond N.

HANDLING

Bitustick XLR membranes are packed in loose corrugated boxes to avoid any damage during transit or during storage at sites. Care should be taken when storing the membranes at sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick XLR membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membrane shall be protected from all sources of heat. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bitustick XLR contains a tacky bitumen compound and during application can adhere to human skin. Bitumen stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY

Bitustick XLR	1.5 mm	1m x 20m, 1m x 10 m,	· ·	
	2.0 mm	1m x 10 m,	wt 20kg#	
Polyprime SB		20L pail & 2	20L pail & 200L drum	
Bituboard	3.2 mm	2m x 1m,	wt 7.7kg#	
	6.0 mm	2m x 1m,	wt 14.0kg#	
Bitustick	R300	1m x 10m	27kg#	
Bitustick	R400	1m x 8m	22kg#	
*Bitutape TS		50mm x10m	50mm x10m, wt 0.6 kg#	
Wooden press		140mm x 21	140mm x 210mm	
Iron Roller		Head dia 38	Head dia 38mm, wt 1.5kg	
(recommended		Width 100m	Width 100mm	
specification)		Length 350mm		

[#] Approximate weight

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Thickness, [mm]	1.5, 2.0	DIN EN 1849-1	
Mass per unit area, [kg/m²]	1.5, 2.0	DIN EN 1849-1	
Reinforcement [glass fibre], [g/m²]	50	EN 29073-1	
Softening point [R&B], [°C]	>105	ASTM D 36	
Tensile strength [L/T], [N/5 cm]	250/180	DIN EN 12311-1	
Elongation [L/T], [%]	1.5/1.5	DIN EN 12311-1	
Puncture resistance, [N]	>100	ASTM E 154	
Hydrostatic pressure @ 4bar [40m]	No leakage	BS EN 12390 (part 8)	
Adhesion strength, [N/mm]			
To primed substrate To self	1.8 2.2	ASTM D 1000	
Crack bridging ability, [mm]	>1	ASTM C 836	
Chemical resistance [pH]	2.5 -11.5	ASTM D 543	
VOC [g/l]	<50	ASTM D3960/ D2369	

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





ifusfick A

Aluminum surfaced solar reflective waterproofing membrane

Polymer modified bituminous self adhesive waterproofing membrane

CHARACTERISTICS

- ► Good resistance to water & vapor
- ► Aluminum surfacing, Excellent solar reflectance
- ► Specially formulated for tropical climates
- ► Self adhesive. Requires peeling off of the silicone film and sticking to the surface
- Excellent adhesion to vertical and horizontal surfaces
- Good tear and puncture resistance
- ► Excellent tensile strength in both longitudinal and transverse direction









DESCRIPTION

Bitustick AL is a tropical grade polymer modified bituminous self adhesive waterproofing membrane. The bitumen compound is laminated onto an impervious, non-perforated, cross laminated solar reflective aluminum surfaced HDPE film.

FIELDS OF APPLICATION

BITUSTICK AL is a multi purpose waterproofing membrane which may be used for mobile homes, small commercial roofs, residential porches and dormers, farm buildings, roof and gutter patching and on profile sheets. It can also be used as a flashing on up-stands.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.



Priming

Apply Polyprime SB* (Solvent based primer) @ 4- 6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which in turn promotes the adhesion between the membrane and the concrete surface. In addition, the primer also acts as a binder for the dust which gets accumulated on the surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bitustick AL membrane and aligning the side laps.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges with a wooden press in order to remove any entrapped air. Furthermore, an iron roller shall be used for rolling

TDS_Bitustick AL_GCC_0519

on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with the base surface. Side overlaps shall be a minimum of 50mm on the selvedge and end overlaps 100mm. When used as a flashing membrane on up-stands and parapets, Bitustick AL membrane will be lapped with the base membrane and taken up on the up-stand and tucked inside the groove cut along the parapet wall. The tucked membrane will be sealed with a bitumen mastic sealant (BITUMASTIC)*.

HANDLING

Bitustick AL membranes are packed in loose corrugated boxes to avoid any damage during transit or during storage at sites. Care should be taken when storing the membranes on sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick AL membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membrane shall be protected from all sources of heat. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bitustick AL contains a tacky bitumen compound which can stick to human skin during application. Bitumen stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY			
Bitustick AL	1.2 mm	1m x 10 m	wt 12kg#
	1.5 mm	1m x 10 m	wt 15kg#
Polyprime SB		20L pail & 200	L drum
Bituboard	3.2 mm	2m x 1m	wt 7.7kg#
	6.0 mm	2m x 1m	wt 14.0kg#
Watertite TS 15		50mm x10m	wt 0.6kg#
Wooden Press		140mm x 210n	nm
Iron Roller		Head Dia 38mm wt 1.5 kg#	
(recommended		Width 100mm	
specification)		Length 350mm	

^{*}Refer to website for TDS # Approximate weight

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Thickness, [mm]	1.2 1.5	DIN EN 1849-1	
Mass per unit area, [kg/m²]	1.2 1.5	DIN EN 1849-1	
Top surfacing	Grey/Silver Cross laminand HPDE aluminu		
Softening point, (R&B), [°C]	>105	ASTM D 36	
Tensile strength [Film], [N/mm²]	Long 40 Trans 45	ASTM D 882	
Elongation @break [Film],[%]	Long 150 Trans 150	ASTM D 882	
Tear strength [Film], [N]	Long 20 Trans 20	ASTM D 1004	
Adhesion strength, [N/mm] Primed substrate Self	1.8 2.2	ASTM D 1000	
Puncture resistance, [N]	>220	ASTM E 154	
Reflectance, [%]	> 60	EN 410	
Hydrostatic pressure @ 5bar (50m)	No Leakage	BS EN 12390 (Part 8)	
Water absorption [Film] @24 hrs, [%]	0.14	ASTM D 570	
Chemical resistance, [pH]	2.5-11.5	ASTM D 543	
Low temperature flexibility	<-15°C	ASTM D 1970	
Crack bridging ability, [mm]	>1	ASTM C 836	
VOC [g/l]	<50	ASTM D3960/ D2369	

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Bitustick R 250

Polyester fleece surfaced protection membrane

Polymer modified bituminous self adhesive waterproofing and protection membrane

CHARACTERISTICS

- ► Protection membrane for bitumen based membranes, tapes and coatings on pipes and complicated profiles.
- ► High puncture and tear resistance
- ► Enhanced UV resistance
- ► Good chemical resistance
- ► Easy to apply. Cold applied
- ► Completely non bio-degradable









DESCRIPTION

Bitustick R 250 is a SBS modified bituminous, self adhesive sheet membrane laminated onto a tough polyester fleece to provide a highly superior waterproofing and protection membrane for underground concrete structures. A selvedge is provided on one side of the membrane to give a bitumen to bitumen contact on the overlaps, thus restricting any water penetration through the laps. Bitustick R 250 conforms to the requirements of BS 8102.

FIELDS OF APPLICATION

Bitustick R 250 is designed to provide protection to bitumen based membranes, tapes and coatings applied on vertical surfaces, pipes and other complicated profiles from puncture and exposure to weather. Due to its flexibility and the presence of a tough and durable top surface, this membrane can be used in areas where anti-root properties are required. Bitustick R 250 has a layer of SBS modified bitumen, which helps it to adhere to any surface and at the same time provide an efficient waterproofing and damp proofing layer for underground structures. Bitustick R 250 can also be used as an anti-root membrane and can be used for waterproofing of roof gardens.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing membrane is as follows:



Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust particles which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bitustick R 250 membrane and aligning the side laps. Re-roll the roll halfway and stand on the unrolled portion to prevent shifting.

TDS_Bitustick R 250_GCC_042C

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges in order to drive out entrapped air with a wooden press. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with the base. A 50mm selvedge is provided on one side of the membrane to give a bitumen-to-bitumen contact on the overlaps. However, the end overlaps will be butt jointed as the bitumen will not adhere to the polyester fleece. To provide a water tight seal and restrict any water penetration through these butt joints, a 200mm wide strip of a double sided bitumen adhesive membrane (Watertite TS 15)* shall be laid on that area prior to the application of the membrane. Once the bitumen strip is put in place, remove the silicone release film from the top and expose the self adhesive bitumen. The Bitustick R 250 membrane shall then be applied on top of the exposed Watertite TS 15 overlapping by 100mm. The subsequent membrane will then be overlapped with the other 100mm of Watertite TS 15.

HANDLING

Bitustick R 250 membranes are supplied in rolls of 1 m x 10m. The rolls are packed in loose corrugated boxes to avoid any damage during transit or during storage at sites. Care should be taken when storing the membranes on sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick R 250 membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat during storage will result in considerable deterioration of the product and reduce shelf life.

HEALTH & SAFETY

Bitustick R 250 contains a tacky bitumen compound, which while applied can stick to human skin. Such stains of bitumen can be removed by using a cloth dipped in a suitable cleaner.

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Thickness, [mm]	2.1	DIN EN 1849-1	
Top surfacing [g/m²], [Polyester]	250		
Mass per unit area, [kg/m²]	1.9	DIN EN 1849-1	
Softening point [°C],	>105	ASTM D 36	
Tensile strength [L/T], [N/5cm]	850/600	DIN EN 12311-1	
Elongation [L/T], [%]	30/40	DIN EN 12311-1	
Puncture resistance, [N]	> 900	ASTM E 154	
Tear resistance [L/T], [N]	450/400	ASTM D 5147	
Adhesion strength, [N/mm]			
To primed surface	1.8	ASTM D 1000	
Hydrostatic pressure @ 5 bar [50m]	No leakage	BS EN 12390 (Part 8)	
Chemical resistance [pH]	2.5 -11.5	ASTM D 543	
UV resistance	Excellent	ASTM G 154	
VOC [g/l]	<50	ASTM D 3960/ D 2369	

All values given are subject to 5-10% variation

SUPPLY		
Bitustick R 250	1m x 10m,	wt19kg#
Polyprime SB	20L pail & 200L drum	
Watertite TS 15	200mm x10m,	wt 2.4kg#
Wooden press	140mm x 210mm	
Iron roller (recommended specification)	Head dia 38mm, Width 100mm Length 350mm	wt 1.5kg#

Approximate weight

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





itustick R

Geo-textile fleece surfaced protection membrane

Polymer modified bituminous self adhesive waterproofing and protection membrane



CHARACTERISTICS

- ► High resistance to puncture
- ► Good resistance to tear propagation
- Resistant to UV degradation
- ► Good chemical resistance
- ► Easy to apply. Cold applied
- Completely non bio-degradable









DESCRIPTION

Bitustick R 300 is a bituminous self adhesive membrane laminated onto a tough geo-textile fleece. The membrane is specially designed to provide a high level of protection for waterproofing membranes applied on underground concrete structures against mechanical loads and pressure. Bitustick R 300 conforms to the requirements of BS 8102

FIELDS OF APPLICATION

Used as a protection membrane for applied waterproofing membrane or coating in the following areas:

- ▶ Basements
- Footings & raft foundations
- ► Tunnels & underpasses
- Manholes
- ▶ Water retaining structures

APPLICATION INSTRUCTIONS

Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing membrane as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to



TDS_Bitustick R 300_GCC_0420

a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust particles which gets accumulated on the concrete surface even after cleaning.

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope laps. Begin membrane application by unrolling the roll of Bitustick R 300 membrane and aligning the side laps. Re-roll the roll halfway and stand on the unrolled portion to prevent shifting.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges in order to drive out entrapped air with a wooden press. Furthermore, an

Quality for Professionals

iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with base surface. A 50mm selvedge is provided on one side of the membrane to give a bitumento-bitumen contact on the overlaps. But the end overlaps will be butt jointed as the bitumen will not adhere to the polyester geo textile fleece. To provide a watertight seal and restrict any water penetration through these butt joints, a minimum 200mm wide strip of a double sided bitumen adhesive membrane (Watertite TS 15)* shall be laid on that area prior to the application of the membrane. Once the bitumen strip is put in place, remove the silicone release film from the top and expose the self adhesive bitumen. The Bitustick R 300 membrane will then be applied on top of the exposed Watertite TS 15 overlapping by 100mm. The subsequent membrane will then be overlapped with the other 100mm of Watertite TS 15.

HANDLING

Bitustick R 300 are supplied in rolls of 1m x 10m. The rolls are packed in loose boxes to avoid any damage during transit or at site. Care should be taken when storing the membranes on sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick R 300 membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bitustick R 300 contains a tacky bitumen compound which, while applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY	
Bitustick R 300	1m x 10m, wt 27 kg#
Polyprime SB	20L pail & 200L drum
Watertite TS 15	200mm x 10m, wt 2.4 kg#
Wooden press	140mm x 210mm
Iron Roller Small (recommended specification) large	large Head Dia 38mm, wt 1.5 kg# width 100mm length 350mm head Dia 38mm, wt 3.5 kg# Width 300mm length 420mm

[#] Approximate Weight

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Thickness	2.7mm	DIN EN 1849-1
Top surfacing	280 g/m² Geo-textile	-
Mass per unit area,		
[kg/m ²]	2.70	DIN EN 1849-1
Softening point	>105°C	ASTM D-36
Tensile strength		
L/T, [N/5cm]	900/650	DIN EN 12311-1
Elongation L/T, [%]	50/60	DIN EN 12311-1
Puncture resistance [N]	>1000	ASTM E 154
Tear strength L/T, [N]	600/450	ASTM D 5147
Adhesion strength, [N/mm]		
To primed surface	1.8	ASTM D 1000
Hydrostatic water	No leakage	
pressure @5 bar [50m]		BS EN 12390 (part 8)
Chemical resistance [pH]	2.5-11.5	ASTM D 543
UV resistance	Excellent	ASTM G 154
VOC(g/l)	<50	ASTM D 3960/ D 2369

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

Bitustick R 400

Polypropylene fleece surfaced protection membrane

Polymer modified bituminous self adhesive anti-root, waterproofing and protection membrane



CHARACTERISTICS

- ► Excellent adhesion on different application decks
- ► High resistance against root perforation
- ▶ Wear resistant
- Chemical resistant
- ► Completely non-biodegradable
- ► Very good draining properties
- ► Excellent puncture and UV resistance
- ► Good adhesion to green concrete upon drying
- Most suitable to protect bitumen based membranes, tapes and coatings on complicated concrete profiles and pipes









DESCRIPTION

Bitustick R 400 is a SBS modified bituminous anti-root waterproofing and protection membrane. The modified bitumen is laminated onto a tough polypropylene fleece which has a high puncture, chemical and UV resistant properties. A selvedge is provided on the overlaps, which ensures a strong bitumen to bitumen contact, thus restricting any water penetration through the laps. Bitustick R 400 conforms to the requirements of BS 8102.

FIELDS OF APPLICATION

Bitustick R 400 is used for waterproofing and protection of concrete foundations and any below ground structures. Due to its tough polypropylene fleece, it has high resistance to root perforations and can be used in areas where anti root properties are required. It is also suitable for use as a protection membrane for bitumen based sheet membranes, tapes and coatings on vertical surfaces, pipes and other complicated profiles from puncture and exposure to weather. The membrane has a layer of modified bitumen, which helps it to adhere to any surface, and at the same time provide an efficient waterproofing layer. This property enables the membrane to be used as a damp-proofing membrane also.



APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self adhesive waterproofing membrane is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Primino

Apply Polyprime SB* (solvent based primer) @ 4-6 m 2 /L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust particles which gets accumulated on the concrete surface even after cleaning

Quality for Professionals

Alignment

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed so as to have «up» slope laps over «down» slope laps. Begin membrane application by unrolling the roll of Bitustick R 400 membrane and aligning the side laps.

Application

Peel off the release film from the self adhesive side and start unrolling the membrane and press it to the surface. Smoothen the membrane from the center to the edges in order to drive out entrapped air with a wooden press. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with the base surface. A 50mm selvedge is provided on one side of the membrane to give a bitumen-to-bitumen contact on the overlaps. However, the end overlaps will be butt jointed as the bitumen will not adhere to the polypropylene fleece. To provide a water tight seal and restrict any water penetration through these butt joints, a min. 200mm wide strip of a double sided bitumen adhesive membrane (Watertite TS 15)* shall be laid on that area prior to the application of the membrane. Once the bitumen strip is put in place, remove the silicone release film from the top and expose the self adhesive bitumen. The Bitustick R 400 membrane will then be applied on top of the exposed Watertite TS 15 overlapping by 100mm. The subsequent membrane will then be overlapped with the other 100mm of Watertite TS 15.

HANDLING

Bitustick R 400 are supplied in rolls of 1 m x 8m. The rolls are packed in loose boxes to avoid any damage during transit or at site. Care should be taken when storing the membranes on sites and should not be kept within close proximity of any sharp or protruding edges to avoid puncturing or damaging the membrane.

STORAGE & SHELF LIFE

Bitustick R 400 membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat during storage will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Bitustick R 400 contains a tacky bitumen compound which, while applied can stick to human skin. Such stains can be removed by using a cloth dipped in a suitable cleaner.

SUPPLY		
Bitustick R 400	1 m x 8 m, wt 22 kg#	
Polyprime SB	20L pail & 200L drum	
Watertite TS 15	200mm x10m, wt 2.4kg#	
Wooden press	140mm x 210mm	
Iron Roller (recommended specification)	head dia 38mm, wt 1.5kg# width 100mm length 350mm	

Approximate weight

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Thickness, [mm]	3.5	DIN EN 1849-1	
Mass per unit area, [kg/m²]	2.75	DIN EN 1849-1	
Top surfacing,[g/m²] Polypropylene	350		
Softening point [°C]	>105	ASTM D 36	
Tear resistance [L/T], [N]	500/450	ASTM D 5147	
Tensile strength (L/T), 1 [N/5 cm]	>700/550	DIN EN 12311-	
Elongation [L/T[, [%] 1	40/50	DIN EN 12311-	
Puncture resistance, [N]	>1800	ASTM E 154	
Adhesion strength, [N/mm] primed surface	1.8	ASTM D 1000	
Chemical resistance [pH]	2.5-11.5	ASTM D 543	
UV resistance	Excellent	ASTM G 154	
Hydrostatic pressure @5 bar [50m]	No leakage	BS EN 12390 (Part 8)	
VOC [g/L]	<50	ASTM D3960/ D 2369	

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Bitustick R 3

Cross laminated waterproofing membrane

Polyester reinforced high performance self-adhesive bituminous waterproofing membrane

CHARACTERISTICS

- ► Excellent puncture resistance and mechanical properties.
- ▶ Cold applied self adhesive and easy to apply.
- Excellent adhesion to vertical and horizontal surfaces. Improved heat resistance.
- Excellent resistance to aggressive soil conditions, ground water / salts and contaminated water.
- Excellent tear and tensile strength in both longitudinal and transverse directions.
- Water and vapor proof.
- Does not Contain Asbestos, Chromated copper arsenate and Lead









DESCRIPTION

Bitustick R 3000 is a high performance self adhesive bituminous waterproofing membrane strengthened with a central core of heavy-duty, non woven polyester fabric with outstanding physical/mechanical characteristics and high puncture resistance laminated onto a top surfacing high density, cross laminated polyethylene film (for excellent dimensional stability and high tensile/tear resistance). The self adhesive side is a SBS modified bitumen compound which is protected with a silicon coated release film. A selvedge is provided on one side of the membrane to give a bitumen to bitumen contact on the overlaps. Bitustick R3000 conforms to the requirements of BS 8102.

FIELDS OF APPLICATION

Bitustick R 3000 membranes are predominantly used as waterproofing or damproofing membranes intended for concrete protection. It may be used for horizontal or vertical applications, and as a damproof course for tanking below ground structures, subways and retaining walls.

APPLICATION INSTRUCTIONS

Surface preparation

As with any waterproofing membranes, proper application is of paramount importance to obtain optimum product performance. A smooth regular and dry surface is always a must for good application. The substrate should be completely free of any protrusions or cavities. The presence



of oily materials, frost, dampness, moisture and any other contaminants should be completely removed.

Priming

Apply Polyprime SB* (solvent based primer) @ 4-6 m²/L to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

Application

- 1. Unroll only the required length, and cut the piece to the desired shape and size.
- 2. Place the pieces of membrane on the area to be covered, and check whether they match with the profile of the marked substrate.
- 3. Peel off release film and carefully place the membrane so as to ensure a minimum of 75mm overlap and then smoothen the membrane from the centre to the edges in order to drive out entrapped air.

TDS Bitustick R 3000 GCC 122

4. In case the concrete structure is at a greater depth or is going to be exposed to site conditions / weather for a long period, place Bituboard asphaltic protection board on top of the membrane soon after the application in order to prevent any damage to the membrane.

HANDLING

Bitustick R 3000 membranes are supplied in rolls of width 1m and lengths of 8m (3mm thick) and 10m (2mm thick) and are packed in loose corrugated boxes to avoid any damage during transit or at site. The membranes can be unloaded by hand or any other convenient means but ensure that there are no sharp or protruding edges within close proximity to avoid puncturing the membrane.

STORAGE & SHELF LIFE

Bitustick R 3000 range of membranes must be stored in a shaded area on wooden pallets, neatly covered by thick fabric and tied securely in a manner that will ensure there is no excessive exposure to sunlight. Do not stack pallets one above the other. The shelf life is 12 months if stored as per recommendations.

DISPOSAL

Bitustick R 3000 is non-hazardous, non-flammable material and therefore can be disposed of in any regular disposal area. Bitustick R 3000 should be disposed of only after wrapping with paper, plastic or cloth as the modified material has tendency to soften under heat and pressure, which would make further handling very difficult.

HEALTH AND SAFETY

Bitustick R 3000 contains a tacky bitumen compound, and during application can adhere to human skin. Bitumen stains can be removed by using a cloth dipped in a light

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

solvent. In case the affected area is sensitive, like the eye, please contact the company physician for advice.

TECHNICAL PI	ROPERTIES	
PROPERTIES	VALUES	TEST STANDARD
Thickness, [mm]	2.0 3.0	DIN EN 1849-1
Roll Size, [m]	1 x 10 1 x 8	
Backing Film	Cross laminated HDPE Film	-
Backing film thickness, [mm]	0.09-0.10	-
Reinforcement	150 g/m² Spun bond polyester	DIN EN 1849-1
Softening point [R&B], [°C]	>105	ASTM D 36
Tensile Strength [Film], [N/mm²] Longitudinal Transverse	55 44	ASTM D 412
Elongation [Film], [%]	300	ASTM D 638
Elongation [Compound], [%]	>1500	ASTM D 412
Tear resistance [Film], [N/mm], [L/T]	>300	ASTM D 1004
Tear resistance [membrane], [N] Longitudinal Transverse	>400 >300	ASTM D 5147
Adhesion strength, [N/mm] To primed concrete To self	1.8 2.0	ASTM D 1000
Puncture resistance, [N]	>900	ASTM E 154
Hydrostatic pressure @ 7 bar	e No leakage	ASTM D 5385
Water absorption [Film], [%]	< 0.15	ASTM D 570
Chemical resistance, [pH]	2.5 - 11.5	ASTM D 543
VOC [g/l]	<50	ASTM D 3960/ D 2369
All values give are s	ubject to 5-10% to	lerance

All values give are subject to 5-10% tolerance





Polyshield HD

Heavy duty bituminous damp proof membrane

Heavy duty Damp Proof Membrane, laminated on to a multi layer high density, high tensile polyethylene film.

CHARACTERISTICS

- ▶ Heavy duty
- ► Economical
- Durable
- Elastomeric
- Multi layer
- ► Easy to use







DESCRIPTION

Polyshield HD is a heavy duty bitumen Damp Proof Membrane laminated on to a multi layer high density high tensile polyethylene film.

FIELDS OF APPLICATION

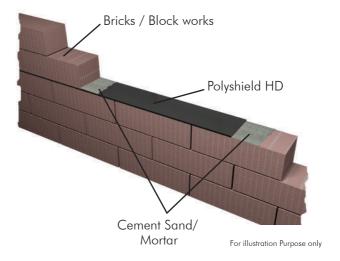
Polyshield HD is used as a damp proof membrane to provide a barrier to the passage of moisture or water from the exterior to the interior or from the ground to the structure. Polyshield HD is manufactured to meet the requirements of BS 6398 and should be installed as per normal building practice as detailed in BS 5628 Part 3 and in accordance with the manufacturers recommendation. It is highly robust to prevent damage during use in all operating conditions and will accommodate substantial movement in excess of the crushing strength of the wall loading. The material has been specifically designed to prevent the membrane extruding under the imposed loading conditions and will prevent ingress of water vapor during the service life of the structure. The special chemical modification of bitumen gives flexibility at low temperatures, high puncture and tear resistance and can be used horizontal or vertical damp proof course applications.

APPLICATION INSTRUCTIONS

Polyshield HD is introduced at the construction stage, during the erection of the brickwork, block work or masonry wall using traditional building construction methods. The DPC must extend through the full wall thickness and it should be laid on an even bed of mortar. Overlapping the material to the same width of the damp proof membrane



or 100mm minimum including sealing form laps. The method of laying, jointing and forming cavity trays should be in accordance with the relevant building regulations and codes of practice. Polyshield HD is fully compatible with the Bitustick* range of membranes to provide a moisture proof system.



TDS_Polyshield HD_GCC_0519

STORAGE & SHELF LIFE

Polyshield HD membrane rolls whether loose or on pallets have to be stored vertically in a shaded area neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight & UV. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Polyshield HD might leave bitumen stains on the skin and hands during application. The stains can be removed using solvents. Care should be taken while using tools to cut the rolls. Use safety gloves while handling. Disposal should be done as per the local disposal regulations.

SUPPLY		
Polyshield HD	3.0mm	100mm x 10m, wt 3.10kg#
		150mm x 10m, wt 4.65kg#
		200mm x 10m, wt 6.20kg#
		250mm x 10m, wt 7.75kg#
		300mm x 10m, wt 9.30kg#

Approximate weight

TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARDS		
Thickness, [mm]	3.0	BS 6398		
Mass per, unit area [kg/m²]	3.1-3.3	BS 6398		
VOC [g/L]	<50	ASTM D 3960 /		

D2369

All values given are subject to 5-10% tolerance

TECHNICAL SPECIFICATION

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polyshield

Modified bituminous damp proof membrane

Polymer modified bitumen Damp Proof Membrane laminated on to a multi layer high density tensile polyethylene film.

CHARACTERISTICS

- ► Economical
- ▶ Durable
- ► Elastomeric
- ► Multi laver
- ► Easy to use





DESCRIPTION

Polyshield is a polymer modified bitumen damp proof Membrane laminated on to a multi layer high density high tensile polyethylene film.

FIELDS OF APPLICATION

Polyshield is used as a damp proof membrane to provide a barrier to the passage of moisture or water from the exterior to the interior or from the ground to the structure. Polyshield should be installed as per normal building practice as detailed in BS 5628 part 3 and in accordance with the manufacturers recommendation. It is highly robust to prevent damage during use in all operating conditions and will accommodate substantial movement in excess of the crushing strength of the wall loading. The material has been specifically designed to prevent the membrane extruding under the imposed loading conditions and will prevent ingress of water vapor during the service life of the structure. The special chemical modification of bitumen gives flexibility at low temperatures, high puncture and tear resistance and can be used horizontal or vertical damp proof course applications.

APPLICATION INSTRUCTIONS

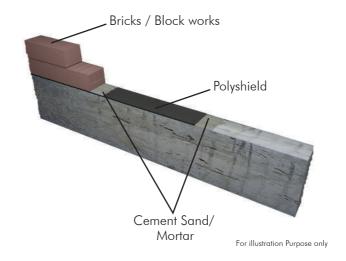
Polyshield is introduced at the construction stage i.e. during the erection of the brickwork, block work or masonry walls using traditional building construction methods. The damp proof membrane must extend through the full wall thickness and it should be laid on an even bed of mortar. Overlapping the material to the same width of the damp proof course or 100 mm minimum including sealing forms laps. The method of laying, jointing and forming cavity trays



should be in accordance with relevant building regulations and codes of practice. Polyshield is fully compatible with Bitustick* to provide a moisture proof system.

STORAGE & SHELF LIFE

Polyshield membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and



Quality for Professionals

tied securely in a manner that will minimize exposure to sunlight and UV. the membranes shall be protected from all sources of heat and extreme temperatures. The shelf life is 12 months if stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce shelf life.

HEALTH & SAFETY

Polyshield might leave bitumen stains on the skin and hands during application. The stains can be removed by using any light solvents. Care should be taken when using tools for cutting Polyshield.

-			-	-
-			-71	7
-			_	

Polyshield	100mm x 10m, wt 1.50kg#
	150mm x 10m, wt 2.25kg#
	200mm x 10m, wt 3.00kg#
	250mm x 10m, wt 4.6kg#

Approximate weight

TECHI	NICAL	SPECIF	FICAT	ION

PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	1.5	DIN EN 1849-1
Mass per unit area, [kg/m²]	1.5 - 1.8	
VOC [g/l]	< 50	ASTM D 3960
		D 2369

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Bituboard

Fibre impregnated asphaltic protection board

Multi layer, asphaltic protection board.



CHARACTERISTICS

- ► Non bio-degradable
- ▶ Weather, warp and rot proof
- ► Tough and durable
- ► Excellent resistance to chemicals
- ► Improved puncture resistance
- ► Compatible with most waterproofing systems
- ▶ Do not contain asbestos, Chromated copper arsenate and lead





DESCRIPTION

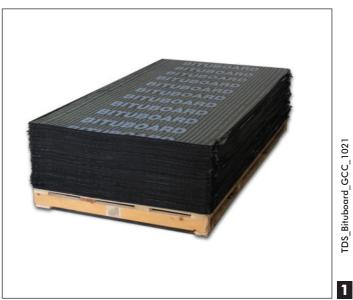
Bituboard is a multi layer, asphaltic protection board. It is manufactured by thermally bonding polymer modified bitumen with selected additives which is then sandwiched between a layer of saturated fibre-glass on one side and anti-stick polyethylene liner on the other.

FIELDS OF APPLICATION

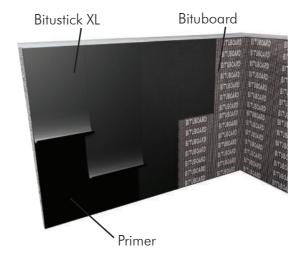
Bituboard has been designed for use as a permanent protection to most waterproofing and damp proofing systems, especially the bitumen based sheet membrane and coating systems indicated in BS 8102. Bituboard will absorb the impact of aggregate shock, normal site foot traffic and protect the waterproofing membrane from penetration by the edges of reinforced steel and aggregate during the backfill process and late settlement.

APPLICATION INSTRUCTIONS

The application of Bituboard should be carried out when the ambient temperature is between 5°C and 55°C and should avoided in case of extreme weather conditions such as sand storms, rain, etc. Bituboard can be fixed on top of the waterproofing membrane by using a double sided adhesive tape (Watertite TS 15)*, Bitubond N or even by torching (for fixing over torch applied membranes). Once the protection board is fixed in place, supports/props have to be used to keep the boards in place till the adhesive is strong enough to hold the board. Subsequent boards shall be laid continuously by butt fitting the edges. For irregular



profiles, the board shall be cut to fit all intersections and protrusions. The butt joints can be sealed with 50mm wide HDPE bitumen adhesive strip to prevent any backfill



For illustration Purpose only

2

material entering and causing damage to the underlying waterproofing membrane.

HANDLING

Bituboard is shrink-wrapped and loaded on pallets for easy handling. The pallets should be loaded or offloaded with the help of a crane or forklift to prevent damage to the protection boards. If the boards are unloaded individually, it is to be ensured that they are stacked back on a pallet or on a flat surface.

STORAGE & SHELF LIFE

Bituboard should be covered and stored in a dry and shaded area away from sunlight, UV and sources of heat. Do not stack one pallet on top of the other. It is recommended not to open the shrink wrap till the time of application. The boards, loose or on pallets, must be stored on flat surface. The shelf life is 12 months when stored as per the recommendations. Excessive exposure to sunlight and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

Bituboard might leave bitumen stains on the skin and hands during application. The stains can be removed by using a suitable cleaner. Care should be taken when using tools to cut the boards.

SUPPLY	
Bituboard	3.2 mm 2m x 1m, wt 7.7kg# 3.5 mm 2m x 1m, wt 8.4kg# 4.0 mm 2m x 1m, wt 9.6kg 6.0 mm 2m x 1m, wt 14.0kg
Watertite TS 15	50mm x 10m, wt 0.60kg#
Bitubond N	5L Tin

Approximate weight

TECHNICAL SPECIFICATION

PROPERTIES VALUES TEST

Thickness, [mm]	3.2/3.5/4/6	DIN EN 1849-1
Density, [g/cc]	1.1-1.2	
Mass per unit area [kg/m²]		
3.2 [mm]	3.7 - 3.9	DIN EN 1849-1
3.5 [mm]	4.0 - 4.2	DIN EN 1849-1
4.0 [mm]	4.7 - 4.9	DIN EN 1849-1
6.0 [mm]	7.0 - 7.2	DIN EN 1849-1
Softening point [R&B], [°C]	> 105	ASTM D 36/
		DIN EN 1427
Asphalt content, [%]	> 65	ASTM D 545
Chisel puncture	Pass	In house test
		method
Heat resistance @80°C	No Flow	DIN EN 52 123
Hydrostatic pressure	No	BS EN 12390
@5 bar [50m]	leakage	(Part 8)
Good resistance to	2.2 - 11.5	ASTM D 543
chemicals, sulphate		
& chlorides [pH]		
VOC [g/l]	<50	ASTMD3960/
		D2369

STANDARDS

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $+23^{\circ}\text{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Bituboard ULTRA

Fibre impregnated asphaltic protection board

Multi layer, asphaltic protection board.

CHARACTERISTICS

- ► Non bio-degradable
- ▶ Weather, warp and rot proof
- ► Tough and durable
- Excellent resistance to chemicals
- ► Improved puncture resistance
- ► Compatible with most waterproofing systems
- ▶ Does not Contain Asbestos, Chromated copper arsenate and Lead





DESCRIPTION

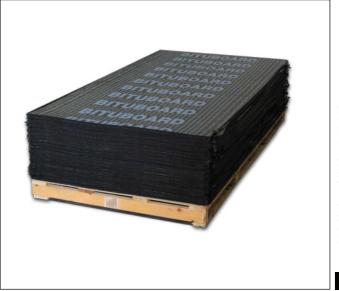
Bituboard ULTRA is a multi layer, asphaltic protection board. It is manufactured by thermally bonding polymer modified bitumen with selected additives which is then sandwiched between a layer of saturated fibre-glass on one side and anti-stick polyethylene liner on the other.

FIELDS OF APPLICATION

Bituboard ULTRA has been designed for use as a permanent protection to most waterproofing and damp proofing systems, especially the bitumen based sheet membrane and coating systems indicated in BS 8102. Bituboard ULTRA will absorb the impact of aggregate shock, normal site foot traffic and protect the waterproofing membrane from penetration by the edges of reinforced steel and aggregate during the backfill process and late settlement.

APPLICATION INSTRUCTIONS

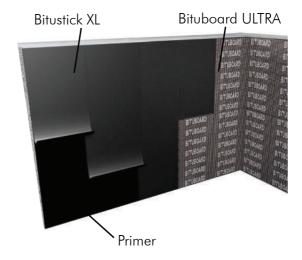
The application of Bituboard ULTRA should be carried out when the ambient temperature is between 5°C and 55°C and should avoided in case of extreme weather conditions such as sand storms, rain, etc. Bituboard ULTRA can be fixed on top of the waterproofing membrane by using a double sided adhesive tape (Bitutape TS)*, Bitubond N or even by torching (for fixing over torch applied membranes). Once the protection board is fixed in place, supports/props have to be used to keep the boards in place till the adhesive is strong enough to hold the board. Subsequent boards shall be laid continuously by butt fitting the edges. For irregular profiles, the board shall be cut to fit all



TDS_Bituboard ULTRA_GCC_1121

___**1**

intersections and protrusions. The butt joints can be sealed with 50mm wide HDPE bitumen adhesive strip to prevent any backfill material entering and causing damage to the underlying waterproofing membrane.



For illustration Purpose only

HANDLING

Bituboard ULTRA is shrink-wrapped and loaded on pallets for easy handling. The pallets should be loaded or offloaded with the help of a crane or forklift to prevent damage to the protection boards. If the boards are unloaded individually, it is to be ensured that they are stacked back on a pallet or on a flat surface.

STORAGE & SHELF LIFE

Bituboard ULTRA should be covered and stored in a dry and shaded area away from sunlight, UV and sources of heat. Do not stack one pallet on top of the other. It is recommended not to open the shrink wrap till the time of application. The boards, loose or on pallets, must be stored on flat surface. The shelf life is 12 months when stored as per the recommendations. Excessive exposure to sunlight and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

Bituboard ULTRA might leave bitumen stains on the skin and hands during application. The stains can be removed by using a suitable cleaner. Care should be taken when using tools to cut the boards.

SUPPLY	
Bituboard ULTRA	3.2 mm 2m x 1m, wt 7.25kg# 4.0 mm 2m x 1m, wt 8.75kg 6.0 mm 2m x 1m, wt 13.5kg
Bitutape TS	50mm x 10m, wt 0.60kg#
Bitubond N	5L Tin

[#] Approximate weight

TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARDS		
Thickness, [mm]	3.2/4/6	DIN EN 1849-1		
Density, [g/cc]	1.1 - 1.2			
Mass per unit area [kg/m²] 3.2 [mm] 4.0 [mm] 6.0 [mm] Softening point [R&B], [°C]	3.4- 3.6 4.2- 4.4 6.55 - 6.75	DIN EN 1849-1 DIN EN 1849-1 DIN EN 1849-1 ASTM D 36/		
Johening Point [R&b], [C]	<u> </u>	DIN EN 1427		
Asphalt content, [%]	> 75	ASTM D 545		
Chisel puncture	Pass	In house test method		
Heat resistance @80°C	No Flow	DIN EN 52 123		
Hydrostatic pressure @5 bar [50m]	No leakage	BS EN 12390 (Part 8)		
Good resistance to chemicals, sulphate & chlorides [pH]	2.2 - 11.5	ASTM D 543		
VOC [g/l]	<50	ASTMD3960/ D2369		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Bitumen emulsion paint

Emulsified thixotropic flexible protective barrier to vapor transmission.

CHARACTERISTICS

- Resists the attack of salts like chlorides and sulphates that are present in the soil
- Easy to apply
- ► Cold applied
- Adheres to concrete, metal, wood, cork, etc.
- Can be applied in closed or confined spaces
- Water-based
- Versatile
- Anti-fungal
- ► Economical







DESCRIPTION

Polycoat is an emulsified thixotropic bitumen protective coating. The coating dries to form a black flexible protective film. The finished film forms a tough barrier to vapor transmission.

FIELDS OF APPLICATION

Polycoat is used for providing damproofing for below ground concrete structures which are above the water table. This can also be used as the protective coating for built-up roofing systems and other exposed surfaces. The coating is also used as a moisture vapor barrier on block works and concrete surfaces prior to cladding.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit-Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the bitumen coating is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections and protrusions are to be removed







TDS_Polycoat_GCC_122

and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Primer is always recommended prior to coating as it not only penetrates into the concrete pores and seals the substrate. It also acts as an adhesion promoter for further coatings. The primer coat can be made in the site by diluting the same bitumen emulsion with 20% water. The primer may be applied by a brush, roller or airless spray. Allow the primer to dry before any further coats are applied. However, if the primer after application is left open for more than 24 hours after it becomes dry, clean the surface of any settled dust and apply a fresh coat of the primer.

Application

Stir the contents of the drum thoroughly prior to application to remove any sediment. The application can be done with a roller, brush or airless spray. Apply the coating at a coverage rate of 1-4 m²/L/coat, depending on the dry film thickness required. For highly demanding situations, it is recommended to apply in multiple coats. Further coats shall be applied only after the previous coat dries off completely. However, the coverage depends on the smoothness and porosity of the substrate and the required thickness of the coating.

Quality for Professionals

Protection

The coating shall be protected from ongoing site activities and during backfilling from getting damaged by a 150 micron polyethylene sheet.

COVERAGE

Average dry film thickness of 125microns achieved when applied $@4m^2/L/coats$, at required number of coats

STORAGE & SHELF LIFE

The drums and pails must be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life is up to 12 months when stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Protective clothing such as gloves and goggles should be worn when handling the product. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidental swallowed, do not induce vomiting, but call for medical assistance immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and content details.

SUPPLY

Polycoat 15L pail & 200L drum

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Form	Thick	-
	viscous	
	liquid	
Color	dark	-
	brown	
Density, [g/cc]	1.02 ±0.02	ASTM D 2939
Solid content, [%]	40±5	ASTM D 2939
Firm set, [hours]	24	ASTM D 2939
Application		
temperature, [°C]	5 to 55	-
Service temp, [°C]	-5 to 75	-
VOC [g/l]	<50	ASTMD3960/ D2369

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23\,^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Rubberized bitumen emulsion

Tough, seamless and flexible vapor proof protective coating





CHARACTERISTICS

- ▶ Cold applied
- ► Single component, easy to apply
- ► Can be applied on damp substrates
- ► Can be applied in closed or confined areas.
- ▶ Water based
- ► Good resistance against chloride and sulphate ions
- ► Has good adhesion to most building substrates
- ► Seamless/joint free
- ► Prevents fungal growth
- ▶ Does not Contain Asbestos, Chromated copper arsenate and Lead





DESCRIPTION

Polycoat RBE is an emulsified rubber modified bitumen coating, which dries to form a tough, seamless, flexible vapor proof protective coating. Polycoat RBE conforms to the requirement of ASTMD 1227 Type III, class 1

FIELDS OF APPLICATION

Can be used for a wide variety of applications, which includes the following:

- protective coating on concrete foundations
- curing compound on freshly cast concrete structures
- dampproof membrane in sandwich constructions
- vapor proof barrier coating

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content).

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the bitumen coating system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. Light



TDS_Polycoat RBE _GCC_0325

mechanical grinding/grit blasting/high pressure water jet may be used to clean the surface of all the contaminants depending on the degree of contamination on the surface to be coated. All surface imperfections and protrusions shall be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

It is highly recommended to apply a priming coat prior to the application of the Polycoat RBE coating on the substrate. The primer can be prepared in the site by diluting Polycoat RBE with 20% water and applying this diluted coat as the primer. For very dry and porous substrates apply two coats of this primer. The primer can be applied to damp or freshly cast concrete surfaces also. However, it should not be applied on waterlogged or flowing water areas. Further coats shall be applied only after the primer coat dries off completely. In case of delay in application of the top coat for more than 24 hours, a fresh coat of primer shall be re-applied.

Foundation Dampproofing

Stir the contents of the drum thoroughly before application to remove all sediments. Depending on the dry film thickness required, apply the rubberized bitumen coating @1-4m²/L./coat. For highly demanding situations, it is recommended to apply in multiple coats to achieve required thickness. On vertical areas, it is recommended

Quality for Professionals

2

to apply the coating in multiple layers in order to avoid sagging of the heavy bodied coating. Subsequent coats shall be applied only after the previous coat dries off completely and shall be applied at right angles to the previous coat. Clean dry sand may be broadcasted onto the wet coating to provide a key for the subsequent coats and achieve a greater dry film thickness. The coating should be applied and finished up to the DPC level. If a plaster or cement render is to be applied on the bitumen coated surface, clean dry sand shall be broadcasted on to the coating whilst it is still wet. Leave the coating for curing for a minimum period of 48 hours before applying any protection board or backfilling. Care shall be taken to ensure that the first coat is not punctured during the application of the second coat. However, if the coating is damaged, the area can be readily over coated provided the surface preparation is done properly.

Protection

Polycoat RBE coating should be protected from getting damaged due to the ongoing site activities and during backfilling. Coating laid on horizontal surfaces can be protected either by a cement sand screed (50mm thick) or by an asphaltic protection board (Bituboard)*. On vertical surfaces the membrane has to be protected with Bituboard. Bituboard can be fixed on the membrane by a double sided bitumen adhesive tape (Watertite TS 15)*.

Note: Curing efficiency of bitumen based emulsion will not to be high as that of resin based curing compounds.

COVERAGE

The coverage varies depending on the type of use: General Use: 2-4 m²/L/coat at required no. of coats

CLEANING

Clean all tools immediately after use with water. Hardened material can be cleaned with a solvent.

STORAGE & SHELF LIFE

The drums must be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life of the product is up to 12 months if stored as per the recommendations. Excessive exposure to sunlight

and UV will result in the deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all bitumen products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. (See packing for specific instructions). Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting. Call for medical help immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and content details.

SUPPLY		
Polycoat RBE		20L pail & 200L drum
Bituboard	3.2 mm 6.0 mm	2m x 1m, wt 7.7kg# 2m x 1m, wt 14.0kg#
Watertite TS 15		10m x 50mm, wt 0.60kg#

Approximate weight

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Color	Dark brown	-
Form	Thixotrophic viscous liquid	-
Density, [g/cc]	1.02±0.02	ASTM D 2939
Solid Content, [%]	40±5 approx	ASTM D 2939
Rubber Content, [%]	>10 on dried fi	lm
Elongation, [%]	>300	ASTM D 412
Drying Time [min]	60	-
Application temp, [°C]	5 to 55	
Service temp, [°C]	-5 to 75	
VOC [g/l]	<50	ASTM D 3960/ D 2369

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $+23^{\circ}\text{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



RB

SBS modified bituminous coating

Tough and flexible vapor proof protective coating.



CHARACTERISTICS

- ► Cold applied.
- ► Single component, easy to apply.
- ► Can be applied on damp substrates.
- Asbestos free, odorless. Can be applied in closed or confined spaces.
- Environmentally friendly. Low VOC.
- ► Resistant against chloride and sulphate ions.
- ► Has good adhesion to most building substrates.
- ► Seamless/joint free.





DESCRIPTION

Polycoat RBE 5 is rubber modified bitumen emulsion coating, which dries to form a tough, seamless, flexible vapor proof protective coating.

FIELDS OF APPLICATION

Polycoat RBE 5 is used as a protective coating for cladding works to prevent infiltration of vapour and moisture into the building structure.

APPLICATION

Application procedures may vary slightly depending upon site conditions. The general recommended guideline for the application of the bitumen coating system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil, grease. Light mechanical grinding/grit blasting/high pressure water jet may be used to clean the surface of all the contaminants depending on the degree of contamination on the surface to be coated.

All surface imperfections and protrusions shall be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable concrete repair mortar.



TDS_Polycoat RBE 5_GCC_0519

Priming

It is highly recommended to apply a priming coat prior to the application of the Polycoat RBE 5 coating on the substrate. The primer can be prepared in the site by diluting Polycoat RBE 5 with 20% water and applying this diluted coat as the primer. For very dry and porous substrates apply two coats of this primer. The primer can be applied to damp or freshly cast concrete surfaces also. However, it should not be applied on waterlogged or flowing water areas. Further coats shall be applied only after the primer coat dries off completely. In case of delay in application of the top coat for more than 24 hours, a fresh coat of primer shall be re-applied.

Application

Stir the contents of the drum thoroughly before application to remove all sediments. Depending on the dry film thickness required, apply the rubberized bitumen coating @1-4m²/L/coat. On vertical areas, it is recommended to apply the coating in multiple layers in order to avoid sagging of the heavy bodied coating. Subsequent coats shall be applied only after the previous coat dries off completely and shall be applied at right angles to the previous coat. Clean dry sand may be broadcasted onto the wet coating to provide a key for the subsequent coats

and achieve a greater dry film thickness. Care shall be taken to ensure that the first coat is not punctured during the application of the second coat. However, if the coating is damaged, the area can be readily over coated provided the surface preparation is done properly.

COVERAGE

Coverage rate will depend on the porosity of the substrate. The following coverage rates can be expected when the coating applied at different coverage rates:

i. 4 m²/L/coat: 0.1 mm DFT
 ii. 2m²/L/coat: 0.2 mm DFT

CLEANING

Clean all tools immediately after use with clean water. Hardened material can be cleaned with a solvent.

STORAGE & SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. Shelf life is up to 12 months in un-opened condition and when stored as per recommendations. Failure to comply with the recommended storage conditions may result in premature deterioration of the product.

HEALTH & SAFETY

As with all bitumen products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting. Call for medical help immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and content details.

SUPPLY

Polycoat RBE 5

200L drums

TECHNICAL PROPERTIES			
PROPERTIES	VALUES	TEST STANDARDS	
Color	Dark brown	-	
Form	Thixotropic viscous liquid	-	
Density @25°C, [g/cc]	1.0±0.05	ASTM D 1475	
Solid content, [% by wt]	35±3 %	ASTM D 2939	
Rubber content on dried film, [%]	3	ASTM D 1644	
Drying time @25°C [mins]	60	-	
Application temperature, [°C]	5 to 55	-	
Service temperature, [°C]	-5 to 75	-	
VOC [g/L]	<50	ASTM D3960/ D2369	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



POLYCOAT RBE 10

Rubberized bitumen emulsion

Tough and flexible vapor proof protective coating

CHARACTERISTICS

- ► Cold applied
- ► Single component, easy to apply
- ► Can be applied on damp substrates
- Can be applied in closed or confined areas.
- ► Water based
- ► Good resistance against chloride and sulphate ions
- ► Has good adhesion to most building substrates
- ► Seamless/joint free







DESCRIPTION

Polycoat RBE 10 is an emulsified rubber modified bitumen coating, which dries to form a tough, seamless, flexible vapor proof protective coating. Polycoat RBE 10 conforms to the requirement of ASTMD 1227 Type III, class 1

FIELDS OF APPLICATION

Can be used for a wide variety of applications, which includes the following:

- protective coating on concrete foundations
- curing compound on freshly cast concrete structures
- dampproof membrane in sandwich constructions
- vapor proof barrier coating for interior & exterior floors & walls

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the bitumen coating system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. Light mechanical grinding/grit blasting/high pressure water jet may be used to clean the surface of all the contaminants depending on the degree of contamination on the surface to be coated. All surface imperfections and protrusions shall be removed and repaired. Structurally unsound and



friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

It is highly recommended to apply a priming coat prior to the application of the Polycoat RBE 10 coating on the substrate. The primer can be prepared in the site by diluting Polycoat RBE 10 with 20% water and applying this diluted coat as the primer. For very dry and porous substrates apply two coats of this primer. The primer can be applied to damp or freshly cast concrete surfaces also. However, it should not be applied on waterlogged or flowing water areas. Further coats shall be applied only after the primer coat dries off completely. In case of delay in application of the top coat for more than 24 hours, a fresh coat of primer shall be re-applied.

Foundation Dampproofing

Stir the contents of the drum thoroughly before application to remove all sediments. Depending on the dry film thickness required, apply the rubberized bitumen coating @1–4m²/L./coat. On vertical areas, it is recommended to apply the coating in multiple layers in order to avoid sagging of the heavy bodied coating. Subsequent coats shall be applied only after the previous coat dries off completely and shall be applied at right angles to the

TDS Polycoat RBE 10 GCC 1116

previous coat. Clean dry sand may be broadcasted onto the wet coating to provide a key for the subsequent coats and achieve a greater dry film thickness. The coating should be applied and finished up to the DPC level. If a plaster or cement render is to be applied on the bitumen coated surface, clean dry sand shall be broadcasted on to the coating whilst it is still wet. Leave the coating for curing for a minimum period of 48 hours before applying any protection board or backfilling. Care shall be taken to ensure that the first coat is not punctured during the application of the second coat. However, if the coating is damaged, the area can be readily over coated provided the surface preparation is done properly.

Protection

Polycoat RBE 10 coating should be protected from getting damaged due to the ongoing site activities and during backfilling. Coating laid on horizontal surfaces can be protected either by a cement sand screed (50mm thick) or by an asphaltic protection board (Bituboard)*. On vertical surfaces the membrane has to be protected with Bituboard. Bituboard can be fixed on the membrane by a double sided bitumen adhesive tape (Watertite TS 15)*.

COVERAGE

The coverage varies depending on the type of use:

general use : $4 \text{ m}^2/\text{L/coat}$ curing compound : $5 \text{ m}^2/\text{L/coat}$

CLEANING

Clean all tools immediately after use with water. Hardened material can be cleaned with a solvent.

STORAGE & SHELF LIFE

The drums must be stored in a covered area, away from direct sunlight, UV and other sources of heat.

The shelf life of the product is up to 12 months if stored as per the recommendations. Excessive exposure to sunlight and UV will result in the deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all bitumen products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. (See packing for specific instructions). Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting. Call for medical help immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and content details.

SUPPLY		
Polycoat RBE 10		20L pail & 200L drum
Bituboard	3.2 mm 6.0 mm	2m x 1m, wt 7.7kg# 2m x 1m, wt 14.0kg#
Watertite TS 15		10m x 50mm, wt 0.60kg#
*Refer to website t	or TDS	# Approximate weight

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Color	Dark Brown	-	
Form	Thixotrophic viscous liquid		
Density, [g/cc]	1.02±0.02	ASTM D 2939	
Solid Content, [%]	40±5		
	approx	ASTM D 2939	
Drying Time [min]	60	-	
Application temp, [°C]	5 to 55		
Service temp, [°C]	-5 to 75		
All I · I ·			

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





of RBE 15

SBS modified bitumen emulsion

Emulsified bituminous coating which dries to form a tough and seamless, flexible water and vapor proof protective coating.

CHARACTERISTICS

- ► Cold applied.
- ► Single component, easy to apply.
- ► Can be applied on damp substrates.
- ▶ Asbestos free, odorless. Can be applied in closed or confined spaces.
- Water-based and therefore is non-toxic.
- ► Environmentally friendly.
- ► Good resistance against chloride and sulphate ions.
- ► Has good adhesion to most building substrates.
- ► Seamless/joint free.







DESCRIPTION

Polycoat RBE 15 is an emulsified bituminous coating modified with 10% Styrene Butadiene Styrene Rubber, which dries to form a tough and seamless, flexible water and vapor proof protective coating.

FIELDS OF APPLICATION

Can be used for a wide variety of applications, which includes the following:

- waterproofing & protective coating on shallow foundations.
- as damp proof membrane in sandwich construction.
- waterproofing in wet areas such as toilets, kitchens etc.
- curing compound on freshly cast concrete structures
- general vapor proof coating

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit-Low-emitting Materials (for the VOC content).

APPLICATION INSTRUCTIONS

Application procedures may vary slightly depending upon site conditions. The general recommended guideline for the application of the bitumen coating system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil, grease. Light mechanical grinding/grit blasting/high pressure water jet



may be used to clean the surface of all the contaminants depending on the degree of contamination on the surface to be coated.

All surface imperfections and protrusions shall be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

It is highly recommended to apply a priming coat prior to the application of the Polycoat RBE 15 coating on the substrate. The primer can be prepared in the site by diluting Polycoat RBE 15 with 20% water and applying this diluted coat as the primer. For very dry and porous substrates apply two coats of this primer. The primer can be applied to damp or freshly cast concrete surfaces also. However, it should not be applied on waterlogged or flowing water areas. Further coats shall be applied only after the primer coat dries off completely. In case of delay in application of the top coat for more than 24 hours, a fresh coat of primer shall be re-applied.

Foundation Waterproofing

Stir the contents of the drum thoroughly before application to remove all sediments. Depending on the dry film thickness required, apply the rubberized bitumen coating @1-2m²/L/coat at required no. of coats. On vertical areas, it is recommended to apply the coating in multiple layers in order to avoid sagging of the heavy bodied

TDS_Polycoat RBE 15_GCC_0322

coating. Subsequent coats shall be applied only after the previous coat dries off completely and shall be applied at right angles to the previous coat. Clean dry sand may be broadcasted onto the wet coating to provide a key for the subsequent coats and achieve a greater dry film thickness. The coating should be applied and finished up to the DPC level. If a plaster or cement render is to be applied on the bitumen coated surface, clean dry sand shall be broadcasted on to the coating whilst it is still wet. Leave the coating for curing for a minimum period of 48 hours before applying any protection board or backfilling. Care shall be taken to ensure that the first coat is not punctured during the application of the second coat. However, if the coating is damaged, the area can be readily over coated provided the surface preparation is done properly.

Protection

Polycoat RBE 15 coating should be protected from getting damaged due to the ongoing site activities and during backfilling.

Coating can be protected either by a cement sand screed (50mm thick) or by an asphaltic protection board (Bituboard*). Alternatively, a 1000 gauge polythene sheet can also be used for protecting the coating in areas where the backfill material is not very coarse.

Note: Curing efficiency of Bitumen based emulsions will not be high as that of Resin based curing compounds

COVERAGE

The coverage varies depending on the type of use: General use: $1-2 \text{ m}^2/\text{L/coat}$ at required no. of coats

CLEANING

Clean all tools immediately after use with clean water. Hardened material can be cleaned with a suitable cleaner.

STORAGE & SHELF LIFE

The pails and drums must be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life of the product is up to 12 months in un-opened condition and when stored as per recommendations. Failure to comply with the recommended storage conditions and excessive exposure to sunlight and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all bitumen products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. (See packing for specific instructions). Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting. Call for medical help immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and content details.

SUPPLY		
Polycoat RBE 15		20L pail & 200L drums
Bituboard	3.2mm	2m x 1m, wt 7.7kg
	6.0mm	2m x1 m, wt 14.0kg
Watertite TS 15		10m x 50mm, wt 0.60kg

11			
#	An	proximate	Weight
//	/ VP	proximi	WCIGIII

TECHNICAL PROPERTIES				
PROPERTIES	VALUES	TEST STANDARDS		
Color	Dark Brown	-		
Form	Thixotropic viscous liquid	-		
Density @25°C, [g/cc]	1.00±0.05	ASTM D 1475		
Solid content, [% by wt]	>65	ASTM D 2939		
Rubber content, [%]	>10 on the dried film.	ASTM D 1644		
Elongation, [%]	> 500	ASTM D 412		
Drying time @25°C, [minutes]	60	-		
Application temperature [°C]	5 to 55	-		
Service temperature [°C]	-5 to 100	-		
VOC [g/l]	<50	ASTM D3960/ D2369		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polycoat RBE 1000

SBS modified bitumen jellified emulsion

Emulsified bituminous waterproofing and protective coating with high SBS rubber

CHARACTERISTICS

- ► Cold applied.
- ► Single component, easy to apply.
- ► Can be applied on damp substrates.
- ► Asbestos free, odorless. Can be applied in closed or confined spaces.
- ► Solvent free & environmentally friendly.
- ▶ Good resistance against chloride and sulphate ions.
- ► Has good adhesion to most building substrates.
- ► Seamless/joint free.







DESCRIPTION

Polycoat RBE 1000 is an emulsified bituminous coating modified with high content of Styrene Butadiene Styrene rubber, which dries to form a tough and seamless, flexible water and vapor proof protective coating.

FIELDS OF APPLICATION

Can be used for a wide variety of applications, which includes the following:

- waterproofing in wet areas such as toilets, kitchens etc.
- waterproofing & protective coating on concrete foundations & boundary wall footings.
- as damp proof membrane in sandwich construction.
- general vapor proof coating for both interior & exterior floors & walls.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content).

APPLICATION INSTRUCTIONS

Application procedures may vary slightly depending upon site conditions. the general recommended guideline for the application of the bitumen coating system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil, grease. Light









TDS_Polycoat RBE 1000_GCC_0322

mechanical grinding/grit blasting/high pressure water jet may be used to clean the surface of all the contaminants depending on the degree of contamination on the surface to be coated. All surface imperfections and protrusions shall be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

It is highly recommended to apply a priming coat prior to the application of the Polycoat RBE 1000 coating on the substrate. The primer can be prepared in the site by diluting Polycoat RBE 1000 with 20% water and applying this diluted coat as the primer. For very dry and porous substrates apply two coats of this primer. The primer can be applied to damp or freshly cast concrete surfaces also. However, it should not be applied on waterlogged or flowing water areas. In case of delay in application of the top coat for more than 24 hours, a fresh coat of primer shall be re-applied.

Foundation Waterproofing

Stir the contents of the drum thoroughly before application to remove all sediments. Depending on the dry film thickness required, apply the jellified emulsion @1–2m²/L/coat at required no. coats. 2nd coat or Subsequent coats shall be applied only after the previous coat dries off

1

completely and shall be applied at right angles to the previous coat. Clean dry sand may be broadcasted onto the wet coating to provide a key for the subsequent coats and achieve a greater dry film thickness. If a plaster or cement render is to be applied on the bitumen coated surface, broadcast clean, dry sand over the primer caoting whilst it is in wet condition. Care shall be taken to ensure that the first coat is not punctured during the application of the second coat. However, if the coating is damaged, the area can be readily over coated provided the surface preparation is done properly.

Protection

Polycoat RBE 1000 coating should be protected from getting damaged due to the ongoing site activities. coating can be protected either by a cement sand screed (50mm thick) or by an asphaltic protection board (Bituboard*). Alternatively, a 1000 gauge polythene sheet can also be used for protecting the coating in areas where the backfill material is not very coarse.

COVERAGE

The coating shall be applied at a coverage rate of 1-2m²/L/coat at required no. of coats and may vary depending on the requirement.

CLEANING

Clean all tools immediately after use with clean water. Hardened material can be cleaned with a suitable cleaner.

STORAGE & SHELF LIFE

The pails and drums must be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life of the product is up to 12 months in un-opened condition and when stored as per recommendations. Failure to comply with the recommended storage conditions and excessive exposure to sunlight and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all bitumen products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. (See packing for specific instructions). Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting. Call for medical help immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and content details.

SUPPLY	
Polycoat RBE 1000	200L drums
Bituboard	3.2mm 2m x 1m, wt 7.7kg 6.0mm 2m x1 m, wt 14.0kg
Watertite TS 15	10m x 50mm, wt 0.60kg
# Approximate weight	

TECHNICAL PR	OPERTIES	
PROPERTIES	VALUES	TEST STANDARDS
Color	Dark brown	-
Form	Thixotropic viscous liquid	-
Density @25°C,	1.05 . 0.05	ACTA D 1.475
[g/cc]	1.05±0.05	ASTM D 1475
Solid content, [%by wt]	>65	ASTM D 2939
Tensile strength, [N/mm²]	>0.2	ASTM D 412
Elongation, [%]	>1000	ASTM D 412
Rubber content, [%]	>15 on the dried film	ASTM D 1644
Recovery, [%]	100	ASTM D 412
Peel adhesion strength [N/mm]	>4	ASTM D 903
Heat resistance @100°C	no flow	ASTM D 2939
Low temperature flexibility, [°C]	≤ -10	ASTM D 5147
Water vapor transmission, [g/m²/24 hours]	<0.2	ASTM E 96
Drying time @25°C, [min]	60	-
Application temperature [°C]	5 to 55	DIN EN 52123
Service temperature [°C]	-5 to 100	-
VOC [g/l]	<50	ASTM D 3960/ D 2369

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



oat FB

Fiber Reinforced Bitumen Paint

Bitumen emulsion based protective coating.

CHARACTERISTICS

- ► Excellent resistance to the attack of salts present in underground water, dilute acids, alkalis, chlorides and sulphate ions.
- ► Good adhesion to most surfaces, like concrete, metal, wood, cork.
- ► Cold applied
- ► Easy to apply.
- ► Can be applied on damp substrates.
- ► Asbestos Free.
- ► Versatile
- ► Non-flammable.
- ► Economical
- ► Conforms to ASTM D 1227, BS 8102:1990 and BS 3416: 1991: Type 2

DESCRIPTION

POLYCOAT FBR is a high build bitumen emulsion based protective coating, manufactured to comply with ASTM D 1227 Type II, Class 1. It is a blend of carefully bitumen and non-asbestos fibres. coating is dark brown in color, which dries to form a tough black flexible film. The system complies with requirements BS 8102:1990.

APPLICATION INSTRUCTIONS

Surface preparation

Ensure that all surfaces that are to be treated are sound and free from oil, grease, cement laitance and loosely adhering particles. If required light grinding mechanical or wire brushing recommended.

Priming

All surfaces are to be primed with POLYCOAT WB prior to the application of POLYCOAT FBR, as this will assist brushing and rolling of the heavier bodied product and will ensure a more readily achieved even coverage. The primer can applied by brush, roller or squeegee. Allow the primer to dry before any further coats are applied. However, if the primer coat is left open for more than 24 hours after it becomes dry, clean the surface of any settled dust and apply a fresh coat



of the primer.

Application

Thoroughly mix the contents of the drum so that the fibres are uniformly dispersed in the coating and there is no settlement due to storage. POLYCOAT FBR can be applied by brush or trowel. Application of 2 coats @ 1lt./m²/coat will give a total Dry Film Thickness of 1mm. The second coat should be applied only after the first coat has dried completely.

The coating shall be protected from ongoing site activities and during backfilling from getting damaged by a 150 micron polyethylene sheet. The protected coating shall be with BITUBOARD protection boards in areas where coarse backfill aggregates will

Roofing Application

Use a reinforcing scrim at up stands and around pipe works. The scrim is to be embedded into the POLYCOAT FBR coating and then another coat is to be given on top of it. The area coated with POLYCOAT FBR shall be temporarily protected from mechanical abrasion using a suitable protection. The coated surface should be covered by an aluminum/solar reflective paint or a screed after it has fully dried-off.

TDS_Polycoat FBR_0625

STORAGE & SHELF LIFE

It should be stored in dry & shaded areas and out of direct sunlight. The shelf life is 12 months. Failure to comply with the recommended storage conditions may result in premature deterioration of the product.

HEALTH & SAFETY

As with all should bitumen products, caution always be exercised. Protective clothing such gloves and goggles should be packaging specific instructions). splashes to the skin or eyes with fresh immediately. Should of products any the accidentally swallowed, induce do not Call for medical assistance immediately. that the container is available for the medical attendant to examine any relevant instructions or content details

SUPPLY

Polycoat FBR

15L pail & 200L drum

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Density, [g/cc]	1.08 ±0.05	ASTM D 2939
Solid content, [%]	50±5	ASTM D 2939
Flexibility	Pass	BS 3416
Firm set, [hours]	24	ASTM D 2939
Application		
temperature, [°C]	5 to 55	-
Service temp, [°C]	-10 to 75	-
Chemical Resistance chlorides & sulphte ions	Sea water, dilu	ute acid,alkalis,

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polycoat WB

Bitumen emulsion paint

Thixotropic bitumen protective coating.

CHARACTERISTICS

Resists the attack of salts like chlorides and sulphates that are present in the soil.

- ► Easy to apply.
- ► Cold applied.
- ▶ Adheres to concrete, metal, wood, cork, etc.
- ► Asbestos free, odorless and can be applied in closed or confined spaces.
- ▶ Water-based and therefore is non-toxic.
- ▶ Non- flammable.
- ▶ Versatile.
- ► Economical.
- ► Conforms to ASTM D 1227, Type III, Class 1.







DESCRIPTION

Polycoat WB is an emulsified thixotropic bitumen protective coating. The coating dries to form a black flexible protective film. The finished film forms a tough barrier to vapor transmission.

FIELDS OF APPLICATION

Polycoat WB is used for providing damproofing for below ground concrete structures which are above the water table. This can also be used as the protective coating for built-up roofing systems and other exposed surfaces. The coating is also used as a moisture vapor barrier on block works and concrete surfaces prior to cladding.

APPLICATION INSTRUCTIONS

The application temperature should be between 4°C to 45°C . Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the bitumen coating is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections and protrusions are to be removed and repaired. Structurally unsound and friable concrete



must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Priming

Primer is always recommended prior to coating as it not only penetrates into the concrete pores and seals the substrate. It also acts as an adhesion promoter for further coatings. The primer coat can be made in the site by diluting the same bitumen emulsion with 20% water. The primer may be applied by a brush, roller or airless spray. Allow the primer to dry before any further coats are applied. However, if the primer after application is left open for more than 24 hours after it becomes dry, clean the surface of any settled dust and apply a fresh coat of the primer.

Application

Stir the contents of the drum thoroughly prior to application to remove any sediment. The application can be done with a roller, brush or airless spray. Apply the coating at a coverage rate of 1-4 m²/L./coat, depending on the dry film thickness required. When applied at 4m²/L./coat, the dry film thickness achieved will be 125 microns. Further coats shall be applied only after the previous coat dries off completely. However, the coverage depends on the smoothness and porosity of the substrate and the required thickness of the coating.

TDS_Polycoat WB_GCC_0524

Protection

The coating shall be protected from ongoing site activities and during backfilling from getting damaged by a 150 micron polyethylene sheet.

COVERAGE

Moisture vapor barrier coating: 4 m²/lt/coat will give dry film thickness of 125 microns.

STORAGE & SHELF LIFE

The drums and pails must be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life is up to 12 months when stored as per recommendations. Excessive exposure to sunlight, UV and other sources of heat will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

Protective clothing such as gloves and goggles should be worn when handling the product. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidental swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Polycoat WB

15kg pail & 200L drum

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Form	Thick viscous liquid	-	
Color	Dark brown	-	
Density, [g/cc]	1.02±0.02	ASTM D 2939	
Solid content, [%]	42±5	ASTM D 2939	
Firm set [@25°C], [hrs]	24	ASTM D 2939	
Application temp, [°C]	5 to 60	-	
Service temp, [°C]	5 to 85	-	

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



^{*} Refer to website for TDS



EASYBIT

Bitumen emulsion

Thixotropic flexible protective barrier to water and vapor transmission for below ground concrete structures which are above the water table.

CHARACTERISTICS

- Resists the attack of salts like chlorides and sulphates that are present in the soil
- ► Easy to apply
- ► Cold applied
- ► Adheres to concrete, metal, wood, cork, etc.
- ▶ Non- flammable
- ▶ Economical





DESCRIPTION

Easybit is a thixotropic bitumen emulsion. The coating is dark brown in color and dries to a black flexible protective film. The finished film forms a tough barrier to water and vapor transmission.

FIELDS OF APPLICATION

Easybit is used for providing waterproofing and dampproofing for below ground concrete structures which are above the water table. The coating is also used as a moisture vapor barrier on block works and concrete surfaces prior to cladding

APPLICATION INSTRUCTIONS

Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the bitumen coating are as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil, grease. All surface imperfections and protrusions are to be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Application

Stir the contents of the drum thoroughly prior to application to remove any sediment. The application can be done with a roller, brush or airless spray. Apply the coating at a coverage rate of 1-4m²/L/coat. Depending on the dry film thickness required.



COVERAGE

Moisture vapor barrier coating: 4m²/L/coat will give D.F.T of 125 microns.

STORAGE & SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. Shelf life is up to 12 months when stored as above. Failure to comply with the recommended storage conditions may result in premature deterioration of the product.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidental Swollen, do not induce vomiting, but call for medical assistance immediately.

DISPOSAL

All disposal practices must be in compliance with all local laws and regulations.

SUPPLY

Easybit 140kg. drums

TDS Easybit RTL 1116

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARD	
Color	Dark brown	-	
Density, g/cc	1.02±0.02	ASTM D 1475	
Firm set @25°C	24 hours -		
Application temperature 5°	C to 55°C		
Service temperature	-5°C to 75°C	,	

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polyflex

Acrylic modified cementitious waterproofing coating

Two component, acrylic cementitious coating which cures to form a tough and flexible coating having excellent waterproofing properties.

CHARACTERISTICS

- ► Good flexibility. Thermal co-efficient of expansion similar to that of concrete
- Good adhesion to both, porous and non porous surfaces
- ► Good mechanical properties
- ► Suitable for light pedestrian traffic
- Excellent durability to long term weathering effect and UV exposure
- Non toxic, therefore suitable for use in potable water applications
- ► Suitable for use in contact with TSE water
- Does not Contain Asbestos, Chromated Copper Arsenate and Lead
- ➤ Resistant to carbon dioxide and chloride ion diffusion. (Forms a film that provides an anti carbonation coating over concrete. A 1 mm coating provides anti carbonation cover which is equivalent to over 75 cm of concrete)







DESCRIPTION

Polyflex is a two part acrylic modified cementitious coating for protecting concrete structures against water, vapor, ingress of chloride ions, attacks of acidic gases and alkalis. It cures to form a tough flexible coating having excellent waterproofing properties. Polyflex is a blend of cement, selected fillers, polymers and graded silica sand which is in the powder form. The liquid contains acrylic co-polymers and wetting agents.

FIELDS OF APPLICATION

Used as a waterproofing and protective coating for the following structures:

- pile heads
- internal lining for potable water reservoirs and other water retaining structures
- protection of exposed concrete structures like bridge decks against carbonation and chloride attack
- inverted roofs, lift and inspection pits, swimming pools, spillways
- backing on marbles and granites to prevent the ingress of moisture
- general construction waterproofing



TDS_Polyflex_GCC_0125

1

- wetarea (bathroom, kitchen, balcony, swimming pool and other features.
- moisture vapor barrier on facade damp proofing

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content and emissions).

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the coating system is as follows:

Surface preparation

The surface must be structurally sound and free of oil, grease, dust and other contaminants which will affect the bonding. Any structural cracks and potholes shall be repaired with a suitable repair mortar from the Polycrete* range of repair mortars. The surface to be treated should be presaturated with water prior to application. However, any standing water shall be removed prior to application.

Mixina

Polyflex is supplied in two pre-measured parts which just requires on site mixing. Do not mix more material than that can be used within the pot life. Part mixing can be carried out by mixing 3 parts of powder with 1 part of liquid (by weight). Pour the liquid into a suitable container and slowly

Quality for Professionals

add the powder to the liquid. Mix the contents using a slow speed drill (300-400rpm) fitted to a proprietary paddle mixer till a homogenous, lump free and creamy consistency is achieved. DO NOT ADD WATER TO DILUTE THE MATERIAL.

Application

It is recommended to apply Polyflex in two coats to provide a minimum thickness of 2mm. Each coat shall be applied @1.8 kg/m² which will give a dry film thickness of 1mm. The coating can be applied with a stiff brush or by an airless spray of nozzle size of 3-4mm and a pressure of 6-7 bar. After the application of the first coat and whilst the coating is still wet, embed a glass fibre mesh (CL 252 or similar materials) at all corners and other joints for added reinforcement. The second coat shall be applied after the first coat dries off completely (6-8 hours @25°C, 50% rh). For general protection against carbonation and alkali attacks, the coating can be applied in minimum 1mm thickness.

PROTECTION

Adequate protection needs to be provided for the coating in the following conditions:

- areas subjected to mechanical abrasion
- flowing water areas

The coating shall be cured immediately after it dries by wet hessian cloth or mist spraying for a minimum period of 72 hours. The coating will achieve its full mechanical properties within 7 days at 25°C and 50% rh.

CLEANING

Clean all tools immediately with water after use. Hardened materials can be removed mechanically only.

COVERAGE

1.8kg per m² per coat for 1mm dry film thickness.

STORAGE & SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. It is recommended to keep the powder bags on pallets and not stacked on the floor. The shelf life is up to 12 months when stored as per recommendations and in unopened conditions. Failure to comply with the recommendations will result in premature deterioration of the product and reduce its shelf life.

_			
~		1 7	٧.

Polyflex	20kg kit (Part A 15kg bag) (Part B 5L pail, wt 5.0kg#)
Polycrete range	25kg bag
CL 252	100mm x 50m

[#]Approximate weight

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

TECHNICAL SPE	CIFICATION	
PROPERTIES	VALUES	TEST STANDARDS
color	Grey/ White*	-
Mixed density, [g/cc]	1.8±0.02	ASTM D 1475
Pot life, [minutes]	45	-
Tensile strength,# [N/mm²]	> 8	ASTM D 412
Elongation, [%]	> 50	ASTM D 412
Adhesion strength, [N/mm²]	> 1.00	ASTM D 4541
Crack bridging, [mm]	> 0.5	ASTM C 836
Hydrostatic pressure @5 bar, [50m]	No leakage	BS EN 12390 (part 8)
Hydrostatic negative pressure@3 bar, [30m]	No leakage	BS EN 12390 [part 8]
Toxicity	Non toxic	BS 6920 [WRAS]
Reaction to fire	Class A	ASTM E 84
Abrasion resistance,# [mg] VOC, [g/l]	< 75 < 50	ASTM D 4060 ASTM D 3960/ D 2369
		D 2309
Drying time [hours]	6-8	_
Drying time, [hours] Full cure, [days]	6-8 7	-

All values given are subject to 5-10% tolerance #Values achieved with fibre mesh reinforcment *Slight variations in color possible

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polyflex S

Acrylic modified cementitious waterproofing coating

Two component acrylic modified cementitious coating, specially designed for structures continually immersed conditions.



CHARACTERISTICS

- ▶ Factory produced and packed to avoid on site variations
- ► Seals light weight aerated blocks.
- ► Seals pre-cast joints.
- ► Non-Toxic, compatible with drinking water.
- ► Anti carbonation protection.
- ▶ Non corrosive to metal.
- ► Can withstand negative and positive water pressures.
- ► Excellent adhesion to most substrates.







DESCRIPTION

Polyflex Super is a two part acrylic modified cementitious flexible water proofing system, especially designed for continually immersed conditions. Polyflex Super when mixed together forms a tough but flexible membrane which bonds to most concrete or masonry substrates to protect against possible ingress of water and water borne chemicals.

FIELDS OF APPLICATION

- for the total water proofing of water tanks both external and internal.
- provides a good anti carbonation protective coating to exposed concrete structures.
- for coating on sea water structures.
- concrete reservoirs, lift walls and pits.
- water proof coating for roofs, domes, tunnels, swimming pools, lift wells, spillways, surge shafts, pre-cast slabs and other wet areas.
- specially designed for permanent ponding.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface Preparation

The surface must be clean and free from oil, grease, dust, loosely adhering particles and any other contaminations.



TDS_Polyflex S_GCC_0322

1

The substrate to be coated with Polyflex Super must be structurally sound. Cracks and pot holes are to be repaired with Polycrete repair mortar prior to the application of the system. Light mechanical grinding or high pressure water jet cleaning of the concrete surface can be done to remove any contaminants on the surface. Saturate or thoroughly wet with water the surface and bring it to surface saturated dry condition prior to the application of the coating. However, ensure that there is no standing or flowing water.

Mixina

Polyflex Super is supplied in two parts and pre-measured. Only on site mixing is needed. Slowly add the powder to the liquid and mix using a slow speed drill fitted with a suitable paddle. Mix only sufficient quantity which can be used within the pot life. Mixing is to be continued till a creamy, homogenous and lump free consistency is achieved.

Application

Apply the mixed material on to the damp surface by a soft bristled brush, roller or a suitable spraying machine. If the brush starts dragging, dampen the surface again. However, do not add water to the mixed material. Allow the first coat to dry considerably, which typically will be 4-5 hours at 35°C. Application of the second coat is to be done at

Quality for Professionals

2

right angles to the first coat. However, pre wetting the first coat is not required prior to the application of the second coat. The typical coverage rate will be 1.75 kg/m²/coat to get a Dry Film Thickness of 1mm. In corners and joints, for added reinforcement, CL 252 mesh shall be embedded in first coat whilst still wet and can be covered with the second coat applications. Curing should be done immediately after the coating has attained its final set. Ponding or the use of wet Hessian cloth is recommended.

COVERAGE

12.5 kg kit will cover approx. 7m^2 at 1mm Dry Film Thickness.

CLEANING & DISPOSAL

Clean all tools with water immediately after use. Hardened materials can be removed mechanically only. Allow the waste to cure. Seal it into a suitable container and bury in landfill. Use licensed waste disposal contractor and consult the local authorities when disposing.

SUPPLY		
Part A (Powder)	7.5 kg kit.	
Part B (Liquid)	5 kg kit.	
CL 252	100mm x 50m	

STORAGE & SHELF LIFE

Store under cover and out of direct sunlight. Protect from extreme temperatures. The shelf life is 12 months when stored as per recommendation and in un-opened conditions. Failures to comply with the recommendations will result in premature deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and

goggles should be worn. Treat any splashes to skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting but call for medical assistance immediately.

TECHNICAL PRO	PERTIES	
PROPERTIES	VALUES	TEST STANDARDS
Color	Grey/ off white	-
Mixed density, [g/cc]	1.75 <u>+</u> 0.05	ASTM D 1475
Pot life, [minutes]	45	-
Tensile strength, [N/mm²]	>1.5	ASTM D 412
Elongation, [%]	>100	ASTM D 412
Adhesion to concrete [N/mm²]	>0.5	ASTM D 4541
Crack bridging ability [mm]	>1	ASTM C 836
Hydrostatic pressure @5bar, [50m]	No leakage	BS EN 12390 [Part 8]
Hydrostati negative pressure @3bar, [30m]	No leakage	BS EN 12390 [Part 8]
Toxicity	Non toxic	BS 6920
Touch dry, [hours]	4-5	-
Foot trafficable, [hours]	24	-
Full cure, [days]	7	-
Application temperature, [°C]	5 to 45	-
Service temperature, [°C]	-5 to +80	-
VOC, [g/L]	<50	ASTM D 3960 / D 2369

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polyflex Combo

Acrylic modified elastomeric cementitious waterproofing and protective coating for concrete

Two component, acrylic cementitious coating which cures to form a tough and flexible coating having excellent waterproofing properties.

CHARACTERISTICS

- ▶ Good flexibility
- Good adhesion to both, porous and non porous surfaces
- ► Good mechanical properties
- ▶ Good abrasion resistance. Suitable for pedestrian traffic
- ► High durability to long term weathering effect and UV exposure
- Non toxic, therefore suitable for potable water applications
- ► Resistant to carbon dioxide and chloride ion diffusion
- ► Can be applied to 24 hours old concrete, there by giving immediate protection to the concrete.
- ► Allows the substrate to breathe







DESCRIPTION

Polyflex Combo is a two part acrylic modified cementitious coating for protecting concrete structures against water, vapor, ingress of chloride ions, attacks of acidic gases and alkalis. It cures to form a tough flexible coating having excellent waterproofing properties. Polyflex Combo is a blend of cement, selected fillers, polymers and graded silica sand which is in the powder form. The liquid part contains acrylic co-polymers and wetting agents.

FIELDS OF APPLICATION

- internal and external water proofing of potable water reservoirs
- good anti carbonation protective coating to exposed concrete structures
- protective coating on structures exposed to sea water
- sealing light aerated blocks, pre-cast joints
- waterproof coating on roofs, domes, tunnels, swimming pools, lift wells, spillways, surge shafts, pre-cast slabs and other wet areas
- specially designed for permanent ponding

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content).



TDS_Polyflex Combo_GCC_0924

1

APPLICATION INSTRUCTIONS

Surface Preparation

The surface must be structurally sound and free of oil and grease, dust and other contaminants which will affect the bonding. Any structural cracks or potholes shall be repaired with a suitable repair mortar from the Polycrete* range of repair mortars. Light mechanical grinding or high pressure water jet cleaning of the concrete surface can be done to remove any contaminants from the surface. The surface to be treated should be presaturated with water prior to application. However, remove any standing water from the concrete surface just before applying the coating.

Mixino

Polyflex Combo is supplied in two pre measured parts which just requires on site mixing. Do not mix more material than that can be used within the pot life. Part mixing can be carried out by mixing only exact half the quantity supplied on both components. Pour the liquid (2 cans) into a suitable container and slowly add the powder to the liquid. Mix the contents using a slow speed drill (300- 400rpm) fitted to a proprietary paddle mixer until a lump free creamy consistency is obtained. DO NOT ADD WATER TO DILUTE THE MATERIAL AT ANY STAGE

Application

It is recommended to apply Polyflex Combo in two coats to provide a minimum thickness of 2mm. Each coat shall

Quality for Professionals

be applied @1.4 kg/m² which will give a dry film thickness of 1 mm. The coating can be applied with a stiff brush or an airless spray of nozzle size of 3-4mm and a pressure of 6-7 bars. After the application of the first coat and whilst it is still wet, embed a CL 252 mesh in all the corners and other joints for added reinforcement. The second coat shall be applied after the first coat dries. for protection against carbonation and alkali attacks, the coating can be applied in minimum 1 mm thickness.

Curing

The coating shall be cured immediately after it dries by wet hessian cloth or mist spraying for a minimum period of 72 hours. The coating will achieve its full mechanical properties within 7 days at 25°C & 50% RH.

Cleaning

Clean all tools immediately with water after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store the material in a covered and shaded area. Protect from sunlight, UV and extreme temperatures. In tropical conditions the product shall be stored in air-conditioned environments. The shelf life is 12 months when stored as per recommendation and in un-opened conditions. Prolonged exposure to heat and humidity will result deterioration of the quality of the product and reduce its shelf life.

HEALTH AND SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as rubber gloves and safety goggles should be worn. Treat any splashes to skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting but call for medical assistance immediately

SUPPLY	
Polyflex Combo	20kg Kit (Part A - 10kg bag) (Part B - 10kg [2x5kg])
Polycrete range	25kg bag
CL 252	100mm x 50m

TECHNICAL SPEC	IFICATION	
PROPERTIES	VALUES	TEST STANDARDS
Color	Beige	-
Mixed density, [g/cc]	1.4±0.05	ASTM D 1475
Pot life , [min]	45	
Tensile strength, [N/mm²]	3.5	ASTM D 412
Elongation, [%]	>250	ASTM D 412
Abrasion resistance, [gms]	<50	ASTM D 4060
Toxicity	Non-toxic	BS 6920
Hydrostatic pressure @5 bar [50m]	No leakage	BS 12390 [Part 8]
Hydrostatic negative pressure @3 bar [30m]	No leakage	BS 12390 [Part 8]
Crack bridging ability, [mm]	>1	ASTM C 836
Adhesion to concrete, [N/mm²]	>0.5	ASTM D 4541
Chemical resistance	pH 2.5-11.5	ASTM D 543
Drying time, [hours]	6-8	-
full cure, [days]	7	-
Application temperature ,[°C]	5 to 45	-
Service temperature,[°C]	-5 to 80	-
VOC, [g/L]	<50	ASTM D 3960 / D 2369

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polycryl FR

Acrylic based flexible vapor proof protective coating

Class A fire rated protective coating for facades applications.

CHARACTERISTICS

- ► Class A fire rated
- ► Environmentally friendly. Low VOC (<10 g/L)
- ► Excellent UV, weatherability & color retention properties
- ► Single component. Easy to use
- ► Cold applied
- ► Excellent resistance to vapor and moisture
- ► Excellent resistance to carbon dioxide diffusion
- ► Excellent resistance to chloride ion penetration
- ▶ Breathable
- ► Good abrasion resistance properties
- ► Heat resistant
- Excellent adhesion on most porous and nonporous substrates
- ► Prevents fungal growth







DESCRIPTION

Polycryl FR is a an acrylic based single component, class A fire-rated protective coating especially designed as moisture vapor barrier on facades application.

FIELDS OF APPLICATION

Can be used as vapor / damp proof coating for a wide variety of applications, which includes the following:

- facade claddina system
- damp proof membrane is sandwich constructions
- vapor proof barrier coating for interior & exterior floor & walls

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit-Low-emitting Materials (for the VOC content).

APPLICATION INSTRUCTION

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the acrylic coating system is as









TDS_Polycryl FR_GCC_0625

follows:

SURFACE PREPARATION

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. Light mechanical grinding/grit blasting/high pressure water jet may be used to clean the surface of all the contaminants depending on the degree of contamination on the surface to be coated. All surface imperfections and protrusions shall be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

PRIMING

A primer coat is recommended, particularly on the vertical surfaces to seal the pores and stabilize the surface. The primer coat can be made in the site by diluting the Polycryl FR 1 to 1 with water. The primer should be applied at a coverage rate of 4-5m²/L. On horizontal surfaces Polycryl FR can be applied directly without primer provided that recommended surface preparation has been carried out.

MIXING

Polycryl FR is single component but stirring of the pail is recommended prior to the application of the coating. This will remove any sediment which may occur during storage.

1

The use of a slow speed drill and suitable paddle should be used in order to avoid the formation of air bubbles.

APPLICATION

Apply the coating with a brush, roller or airless spray. Allow the coating to dry completely before applying the subsequent coats. 2 coats should always be applied; the second coat at 90° to the first. We recommend that a non-woven geo-textile membrane be embedded into the first coat whilst it is still wet at all expansion joints projections and corner fillets to reinforce these areas. Allow the final coating to cure fully (72 hours) after which it can be put in service. For roof applications, the coating should be applied @1.1 L/m²/coat for a DFT of 1.5mm in 2 coats. As a protective coating, vapor barrier on concrete/render/plaster surfaces, the coating should be applied @0.70 L/m²/coat for a DFT of 1 mm in 2 coats.

CLEANING

Clean all the tools with water after use. Hardened materials can be removed mechanically only. Partially used materials in pails can be re-used; all cured and partially cured material should be removed before re-using the material.

STORAGE AND SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. In tropical climate the product must be stored in air - conditioned environment (<25°C). Shelf life is up to 12 months when stored as recommended.

HEALTH AND SAFETY

As with all construction chemicals products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Abrasion resistance

Application temperature,

Impact resistance

Polycryl FR 15L pail

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	STANDRADS
Color	White/Grey	-
Density, [g/cc]	1.60±0.05	ASTM D 1475
Solid content, [%]	70±3	ASTM D 1644
VOC, [g/L]	<10	
Tensile strength, (MPa)	<u>≥</u> 1.0	ASTM D412
Elongation, (%)	<u>≥</u> 35	ASTM D412
Reaction to fire	Class A	ASTM E84
Water vapor transmission g/m²/24Hours	0.25	ASTM E96
Pull off Test, N/mm ²	>1.0	BS 1881-part-207

Good

Good

5°C to 45°C

ASTM D 4060

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Single component, acrylic waterproofing and protective coating

Especially designed for PU Foam UV resistance protection on roof applications





CHARACTERISTICS

- ► Excellent UV, weatherability & color retention properties
- ► Single component. Easy to use
- Excellent resistance to water and moisture
- ▶ Breathable
- ► High solar reflectance
- ► Environmentally friendly. Low VOC (<10 g/L)
- Excellent adhesion on PU Foam and most porous substrates







DESCRIPTION

Polycryl PF is a single component, acrylic waterproofing and protective coating especially designed for PU Foam on roof applications. Polycryl PF upon curing forms a tough, flexible and durable coating which is resistant to UV and other weathering agents, due these factors the coat will be perfect bonded to PU Foam surface, representing the safest option for both permanent and temporary exposed roofs.

FIELDS OF APPLICATION

Can be used as a protective coating for a wide variety of applications, which includes the following:

- spray applied polyurethane foam
- protection coating for exposed roofs

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the SS Credit- Heat Island Reduction and the EQ Credit- Lowemitting Materials (for the VOC content).

APPLICATION INSTRUCTION

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the acrylic coating system is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants. For concrete substrate, impurities like dust, traces of curing compound, oil and grease shall



TDS_Polycryl PF_GCC_0322

be cleaned thoroughly. Light mechanical grinding/grit blasting/high pressure water jet may be used to clean the surface of all the contaminants depending on the degree of contamination on the surface to be coated. All surface imperfections and protrusions shall be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* range concrete repair mortar.

Priming

On horizontal surfaces Polycryl PF can be applied directly without primer provided that recommended surface preparation has been carried out. A primer coat is recommended, particularly on the vertical surfaces to seal the pores and stabilize the surface. The primer coat can be made in the site by diluting the Polycryl PF 1 to 1 with water. The primer should be applied at a coverage rate of $5m^2/L$. Allow the primer to become dry (approx. 30 minutes) prior to the application of the top coating. On horizontal surfaces Polycryl PF can be applied directly without primer provided that recommended surface preparation has been carried out. Primer coat is not required when applied as a protection coating for PU Foams.

Mixing

Polycryl PF is single component but stirring of the pail is recommended prior to the application of the coating. This will remove any sediment which may occur during storage.

1

The use of a slow speed drill and suitable paddle should be used in order to avoid the formation of air bubbles.

Application

Apply the coating with a brush, roller or airless spray. Allow the coating to dry completely before applying the subsequent coats. 2 coats should always be applied; the second coat at 90° to the first. We recommend that Watertite CL 252 /a non-woven geo-textile membrane be embedded into the first coat whilst it is still wet at all expansion joints projections and corner fillets to reinforce these areas. Allow the final coating to cure fully (72 hours) after which it can be put in service. For roof applications, the coating shall be applied @0.85 L/m²/coat for a DFT of 1.0mm in 2 coats.

COVERAGE

 $1.5 \, \text{m}^2/\text{L}$ at 400 microns Dry Film Thickness.

CLEANING

Clean all the tools with water after use. Hardened materials can be removed mechanically only. Partially used materials in pails can be re-used; all cured and partially cured material should be removed before re-using the material.

STORAGE AND SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. In tropical climate the product must be stored in air - conditioned environment ($<25^{\circ}$ C). Shelf life is up to 12 months when stored as recommended.

HEALTH AND SAFETY

As with all construction chemicals products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Polycryl PF 25kg pail

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	STANDARDS	
Color	White	-	
Density, [g/cc]	1.35 ±0.05	ASTM D 1475	
Solid content, [%]	60 ±2	ASTM D 2969	
VOC, [g/L]	<10	ASTM D 3960	
Tensile strength, [N/mm ²]	≥2	ASTM D412	
Elongation, [%]	≥100	ASTM D412	
Tensile strength retention after UV ageing, [%]	>90	ASTM D412	
Elongation retention after UV ageing, [%]	>90	ASTM D 412	
Adhesion to polyurethane foam [N/mm²]	≥0.5	ASTM D 4541	
Adhesion to concrete [N/mm²]	≥1.5	ASTM D 4541	
Water flood test	Pass	-	
UV resistance @ 1000 Hrs	No deterioration	ASTM G 154	
Application temperature	5°C to 45°C	-	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polytex

Elastomeric acrylic waterproofing and protective coating

Single component product that upon curing forms a tough and flexible coating which is resistant to UV and other weathering agents.



CHARACTERISTICS

- ► Single component, easy to apply
- ► Protects exposed concrete structures against carbonation and ingress of atmospheric gases and salts
- ► Excellent UV resistance
- ► Elastomeric- high crack bridging capability
- ► Excellent adhesion to most of the substrates
- ► Good resistance chloride and sulphate ions
- ▶ Does not contain Asbestos, Chromated Copper Arsenate and Lead







DESCRIPTION

Polytex is a single component, elastomeric, acrylic waterproofing and protective coating. Polytex upon curing forms a tough, flexible and durable coating which is resistant to UV and other weathering agents.

FIELDS OF APPLICATION

can be used as waterproofing and protective coating for sloped concrete roofs & metal profile roofs

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the SS Credit- Heat Island Reduction and the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the coating is as follows:

Surface Preparation

Concrete Surface:

Clean the surfaces which shall receive the coating of all dust, dirt, moss, oil and grease, loose particles, cement laitance and all other deleterious materials which will affect the adhesion of the coating with the substrate. Cracks and potholes shall be repaired with concrete repair mortar from the Polycrete* range.

Metal surface:

Clean the surface of all rust scales. This can be achieved by wire brushing or grit blasting.



TDS_Polytex_GCC_0522

1

Priming

Polytex shall be diluted with 20% water and applied as primer coat on the concrete surface to seal the pores and stabilize the surface. The primer also functions as an adhesion promoter for the top coats. This primer coat can be applied by a brush, roller or airless spray and allowed to dry completely before the application of acrylic coating.

Application

Mix the contents of the drum prior to the application to remove any sediment. Polytex can be applied by soft bristled brush, roller or an airless spray. When applying by airless spray then dilute the coating with approximately 5% water to reduce the viscosity of the coating. Apply the first coat of undiluted material at a coverage rate of 1L/m²/coat to get a Dry Film thickness of 0.50 mm. It is important to ensure that each coat has to be cured totally before applying the next coat. The second coat should be applied at right angle to the first at the same coverage rate, to ensure a full unbroken coating to the substrate. For improved strength and flexibility, embed a 65 g/m² non woven geo-textile membrane whilst the first coat is still wet on all corner joints, fillets and pipe penetration joints. Allow the coating to cure fully for 72 hours to achieve its full properties.

Caution: Prolonged water stagnation will cause the coating to beome soft and peel off. Adequate protective measures shall be taken when applying in water logging areas.

Quality for Professionals

2

COVERAGE

1L/m²/coat for 0.5mm Dry Film Thickness. Two coats will give a combined thickness of 1.0mm thickness.

CLEANING & DISPOSAL

Clean all the tools with water after use. Hardened materials can be removed mechanically only. Allow the waste to cure. Seal it into a suitable container and bury in landfill. Use licensed waste disposal contractor and consult the local authorities when disposing.

STORAGE & SHELF LIFE

The pails and drums must be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life of the product is up to 12 months if stored as per recommendations. Excessive exposure to sunlight an UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemicals products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes immediately with fresh water. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polytex	20L pail
Polycrete	25kg bag

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Color	White/grey	-
Tensile strength, [N/mm²]	> 1	ASTM D 412
Elongation @break, [%]	>50	ASTM D 412
UV resistance @100 [hrs]	Passes	ASTM G 154
Crack bridging ability, [mm]	> 0.5	ASTM C 836
Application temp, [°C]	5 to 45	-
Service temp, [°C]	-5 to 70	-
VOC [g/L]	<50	ASTM D3960/ D 2369

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

Polytherm AC

Highly efficient, energy-saving flexible coating

Water-based pure acrylic resin proving efficient thermal protection for the entire structure.





CHARACTERISTICS

- ► Durable & provides high degree heat insulation properties
- Very high emittance & reflectance properties
- ► Excellent dirt pick-up resistance over longer period of time
- ► Reduced thermal conductance and heat gain thereby by increasing energy efficiency
- ▶ Outstanding adhesion over a variety of substrates
- ► Waterproofing & resistance to blistering
- ► Low VOC & non-toxic
- ▶ UV protection
- ▶ Washable









DESCRIPTION

Polytherm AC is water-based pure acrylic resin proving efficient thermal protection for the entire structure. Polytherm AC is non-toxic, washable & environment friendly forming a seamless membrane that resist many harsh chemicals & bridges hairline cracks. Polytherm AC has high emittance & reflectance as well as a very low conductivity value which reduce thermal shock & heat penetration thereby keeping roofs much cooler in hot summer weather. They offer UV protection & display excellent dirt pick-up resistance and retain their flexibility long after ageing.

FIELDS OF APPLICATION

- roofs, terraces, balconies, domes, etc.
- sandwich panels, corrugated sheets
- refurbishing coating works on minerals surfaced waterproofing membranes
- concrete facades

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the SS Credit- Heat Island Reduction and the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the coating system is as follows:



Surface preparation

All the surfaces must be cleaned and made free of dust, dirt, moss, oil, grease and other loose particles. This can be achieved by grit/sand/shot blasting. As a minimum, vigorous wire brushing should be employed. All pot holes and surface defects shall be repaired with a suitable concrete repair mortar from the Polycrete* range.

Priming

Polytherm AC does not require priming and can directly be applied onto the surface. In case of highly porous surface, a priming coat is recommended to seal the pores and stabilize the surface. The primer coat can be produced on site by diluting Polytherm AC 1 to 1 with water. Apply the primer coat @ 5m²/L and allow to dry.

Mixing

Polytherm AC is a single component product but stir the contents of the pail thoroughly prior to application to remove any sediment. A slow speed drill and suitable paddle mixer shall be used to avoid the formation of bubbles.

Application

Once stirred, Polytherm AC should be immediately applied either by brush, roller or industrial sprayer. It is recommended that coating be applied in a minimum of two coats. Should not be applied if relative humidity exceeds 95%. Each subsequent coat shall be applied only after the previous coat dries off completely. After application the

TDS_Polytherm AC_GCC_0322

1



Polythane P

Liquid applied waterproofing and protective coating

Hybrid Polyurethane modified with specially selected polymers to form a tough, flexible and durable coating for concrete structures.







CHARACTERISTICS

- Forms a highly elastomeric, tough and resilient membrane.
- ► Environmentally friendly.
- ► Low VOC
- ▶ Pitch coal tar free.
- ► Single component.
- ► Easy to apply.
- ► High tensile strength & elongation
- ► Excellent crack bridging properties.
- Excellent UV resistance, weatherability & color retention properties
- ► Excellent resistance to water and vapour.
- ► High resistance against chlorides, sulphates, bacteria, oil and common fuels.









DESCRIPTION

Polythane P is a liquid applied waterproofing and protective coating for concrete structures based on a hybrid polyurethane. the polyurethane is modified with specially selected polymers to form a tough, flexible and durable coating. it is completely free from coal tar and other hazardous ingredients.

FIELDS OF APPLICATION

- Waterproofing of wet areas like bathrooms, toilets, public showers & kitchens.
- Waterproofing of roofs, terraces, balconies, domes, aluminium sandwich panels and corrugated sheets.
- protective and decorative coating on exposed concrete surfaces (both vertically and horizontally).

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the SS Credit- Heat Island Reduction and the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface preparation

All the surfaces must be cleaned and made free of dust, dirt, moss, oil, grease and other loose particles. This can be achieved by grit/sand/shot blasting. As a minimum, vigorous wire brushing should be employed. All pin holes



and surface defects shall be repaired with a suitable Polycrete* concrete repair mortar.

Priming

Polythane P does not require priming and can directly be applied onto the concrete surface. In case of highly porous surface, a priming coat is recommended to seal the pores and stabilize the surface. The primer coat can be produced on site by diluting Polythane P 1 to 1 with water. Apply the primer coat @ 5m²/L and allow to dry.

Mixing

Polythane P is a single component product but mix the contents of the pail thoroughly prior to application to remove any sediment. A slow speed drill and suitable paddle mixer shall be used to avoid the formation of air bubbles.

Application

The coating can be applied with a brush, roller or airless spray and shall be applied in a minimum of 2 coats. The 1st coat shall be allowed to dry completely before the 2nd coat is applied. The 2nd coat shall be applied cross wise to the first coat. The coating will achieve its full strength after a curing period of 7 days.

Corner detailing

It is recommended to reinforced all corners with Ceresit CL 252 sealing strip. The sealing strip shall be embedded into the first coat whilst it is still wet and covered fully with the second coat.

TDS_Polythane P_GCC_0625

1

COVERAGE

 $0.8L/m^2/coat$ for 1.5mm DFT in 3 coats.

CLEANING & DISPOSAL

Clean all the tools with water after use. Hardened materials can be removed mechanically only. Allow the waste to cure. Seal it into a suitable container and bury in landfill. Use licensed waste disposal contractor and consult the local authorities when disposing.

STORAGE & SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. In tropical climate the product must be stored in air - conditioned environment (<25°c). The shelf life is up to 12 months in unopened conditions if stored as per the recommendations.

HEALTH AND SAFETY

As with all construction chemicals products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polythane P	20L pail
Ceresit CL 252	
sealing strip	120mm x 50m roll

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

TECHNICAL SP	ECIFICATION	
PROPERTIES	VALUES	TEST STANDARDS
Color	Grey/white/black	-
Form	Viscous liquid	-
Density, [g/cc]	1.25±0.05	ASTM D 1475
Solid content, [%]	63±3	ASTM D 1644
VOC, [g/l]	<20	ASTM D 3960 / D 2369
Tensile strength, [N/mm²]	>2	ASTM D 412
Elongation, [%]	>500	ASTM D 412
Shore 'A' hardness	50-60	ASTM D 2240
hydrostatic pressure @ 5bar [50m]	No leakage	BS EN 12390
Crack bridging, [mm]	1.5	ASTM C 836
Low temperature flexibility, [°C]	-15	UEAtc / ASTM D 5147
Chemical resistance	chlorides, sulphates, oil, bacteria and common fuels	ASTM D 543
Solar reflective index		
[SRI] [White]	>80	ASTM E 1980
Solar reflectance	>75	EN 410
Emissivity	<1	EN673
Re-coat interval, [hours]	6	-
Full cure, [days]	7	-
Application temperature, [°C]	-5 to 45	-
Service temperature, [°C]	-10 to 70	

All values given are subject to 5-10% tolerance



coating must be back rolled to reduce surface irregularities and improve bonding.

COVERAGE

 $0.8L/m^2/coat$ for 500μ DFT. [minimum recommended thickness is 1mm DFT and can be achieved in two coats.]

CLEANING & DISPOSAL

Clean all equipment & tools using fresh water & flush mineral spirits through spray equipment to prevent rusting. All disposal practices must be in compliance with all local laws and regulations.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

SUPPLY

Polytherm AC 20L pail

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat a ny splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately. For safe handling information on this product, please refer to the Material Safety Data Sheet (MSDS).

PROPERTIES	VALUES	TEST STANDARDS
Color	White [Other colors	on request]
Form	Viscous liquid	d -
Density, [g/cc]	1.3 <u>+</u> 0.05	ASTM D 1475
Solids content, [%]	63±2	ASTM D 2369/ ASTM D 1644
Tensile strength, [N/mm ²]	1.5	ASTM D 2370
Elongation, [%]	>300	ASTM D 2370
UV resistance @ 1000hrs	Passes	ASTM G 156
Tensile strength after UV ageing @ 1000hrs, [N/mm²]	2.0	ASTM D 2370
Elongation after UV ageing @ 1000hrs, [%]	200	ASTM D 2370
Water swelling resistance, [%]	<8	ASTM D 471
Adhesion [Dry] - concrete / steel, [pli]	>3	ASTM C 794, ASTM D 903
Adhesion [wet] - concrete / steel, [pli]	> 2	ASTM C 794, ASTM D 903
Tear resistance, [lbf/in]	> 80	ASTM D 624
Water vapor transmission, [g/m²/h]	<2	ASTM E 96
Solar reflectance, [%]	>80	BS EN 410
Emissivity, [%]	>85	BS EN 12898

TECHNICAL PROPERTIES

All values given are subject to 5-10% tolerance

VOC, [g/L]

Re-coat interval, [hrs]

Standard compliance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

≤50

6

ASTM D 3960/

ASTM D 2369

ASTM D 6083



Bitubond HM

Hot poured waterproofing membrane

CHARACTERISTICS

- ► Forms a tough and flexible waterproofing membrane
- ➤ Suitable for high ambient temperature application. Will not run or flow at temperatures up to 80° C
- ► Has good adhesion to asphalt and concrete substrates
- ► Seamless / Joint free







DESCRIPTION

Bitubond HM is a single component, hot-poured rubber asphalt compound, which cures to form a tough & flexible waterproofing membrane.

FIELDS OF APPLICATION

Waterproofing split-slab construction Ideal for roof deck waterproofing using the inverted roof membrane assemblies & green roof systems. Below ground waterproofing of water retaining structures including reservoir, floors & roofs, swimming pool substructures and irrigation canal floors

APPLICATION INSTRUCTIONS

Surface Preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. Light mechanical grinding / grit blasting / high pressure water jet may be used to clean the surface of all the contaminants depending on the degree of contamination on the surface to be coated. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable concrete repair mortar.

Priming

Polyprime SB shall be primed on the prepared substrate prior to the application of Bitubond HM. Due to its low viscosity, the primer is penetrative in nature and easily penetrates into the concrete pores which promotes the adhesion between the membrane and the concrete surface. In addition to that, the primer also acts as a binder for the dust particles which gets accumulated on the concrete surface even after cleaning. Application of primer will also assist in the application of this heavy bodied coating and



will ensure a more readily achieved even coverage. The primer can be applied with a brush, roller or squeegee.

Application

Heat Bitubond HM to 175°C in a suitable oil jacketed heat vessel. Pour the melted compound on the surface and spread or apply it with a trowel / spatula at a rate of 1m2 /ltr/coat to achieve a dry film thickness of 1mm. For more demandingsituations, it is recommended to apply the coating @ min 2mm DFT. Protect the applied membrane from damage until it has cooled down and forms a tough resilient membrane.

Precaution

Care should be taken when heating Bitubond HM. The maximum safe heating temperature should not exceed 210° C. Use an oil jacketed bitumen heater with temperature control. Small quantities (up to 5 Kg) can be heated by direct heating method.

Protection

Bitubond HM coating should be protected from getting damage due to the ongoing site activities and during backfilling. Coating laid on horizontal surfaces can be protected either by a cement sand screed (50mm thick) or by a fibre impregnated asphaltic protection board (Bituboard). On vertical surfaces the coating shall be

TDS_Bitubond HM_GCC_0518

protected with Bituboard. Bituboard can be fixed on the membrane by a double sided bitumen adhesive tape (Watertite TS 15).

LIMITATIONS

Bitubond HM is not recommended for:

- Aerated concrete
- Exposed or wearing surface
- Damp, contaminated surface
- Application below 5°C

Consult before using over concrete with curing compounds or existing waterproofing membranes.

STORAGE & SHELF LIFE

BITUBOND HM should be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life is up to 12 months if stored as per recommendation.

HEALTH & SAFETY

As with all bitumen products caution should always be exercised.

- Fire Flash Point 210° C
- Skin & Eyes Can cause severe burns. If contact occurs, cool affected area with cold water and seek medical assistance immediately
- PPE Protective clothing such as gloves and goggles should be worn.

SUPPLY	
Bitubond HM	16kg Block inside a carton
Polyprime SB	20L Pail

TECHNICAL DATA		
PROPERTIES	VALUES	TEST METHODS
Solid Content, [%]	100	ASTM D 2939
Specific gravity	1.03 <u>+</u> 0.05	ASTM D 70
Resiliency, [%]	> 60	ASTM D 5329
Elongation, [%]	> 1200	ASTM D 412
Bond	Pass	ASTM D 5329
Resistance to mild acids and alkalis	Excellent	ASTM D 896
Crack bridging ability, [mm]	>2	ASTM C 836
Minimum application temperature, [°C]	+ 5	-

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.







Single component solvent based synthetic rubber

Used as an adhesive for bonding bitumen fiber boards and other materials

CHARACTERISTICS

- ► Excellent heat resistance
- ► Single component, easy to apply
- ► Designed to use in tropical climates
- ► Can be applied by brush or scrapper



DESCRIPTION

Bitubond N is a single component solvent based synthetic rubber adhesive. Used as an adhesive for bonding bitumen fiber boards, bitumen felt, plastic, laminates, veneer boards, rubber and plastic edging strips, rubber, leather, linoleum, felt, cork, foam to wood, chipboard, concrete, stone, metals and bitumen surfaces.

APPLICATION INSTRUCTIONS

Surface preparation

The surface should be free from dust, dirt, curing compound, oil etc. Clean the surface thoroughly to remove all loosely adhering particles and cement laitance.

Application temperature

Do not use at temperatures below $+5^{\circ}$ C. At low temperature care must be taken that the temperature of the adhesive and of the surfaces to be bonded is higher than the ambient temperature. Cold materials have a strong tendency to attract the moisture present in the surrounding air. Moisture on the adhesive film may have a disastrous effect on the bond and will lead to unsatisfactory results. Assembly time: 10 to 30 minutes

Coverage

Dependent on the surface texture of the materials to be bonded. 2-3 m²/L (if applied to both surfaces)

Directions for use

Apply an even film of adhesive on both the surfaces with a strong brush or spreader. For porous substrates two coats are to be applied. The second is to be applied after the first coat dries. The two materials are to be bonded when the adhesive applied becomes tacky. Take care to position the



materials accurately, because once the joint is made, they cannot be adjusted by sliding. Next firmly tap the surfaces with a rubber hammer or roll with a pressure roll. A press may be used as well; the pressure must then be sufficiently high and evenly applied to the entire surface. Bumps and gaps reduce the contact surface. Air bubbles can be avoided by unrolling the material during fixing. Bitubond N Contact Adhesive has a very good initial grab. However, pressure applied only by hand is not sufficient. To obtain optimum results, it is essential to tap or roll firmly over the entire surface in all cases. The use of clamps, which only apply a pressure to the edges, is absolutely insufficient. Do not leave the materials coated with the contact adhesive liquid to dry in a draughty damp or dusty space. Supports/ props can be used to keep the boards in place till the adhesive is strong enough to hold the board. Note: Adhesive stains can be removed by a cleaning solvent.

Cleanina

Clean all tools immediately after use with a cleaning solvent.

STORAGE & SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. In tropical climates the product must TDS Bitubond N GCC 0319

be stored in air—conditioned environment. Bitubond N has a shelf life of 12 months, provided it is stored in unopened containers in a cool place.

HEALTH AND SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

PACKING		
Bitubond N	5L pail	
COVERAGE		

TECHNICAL PROPERTIES		
PROPERTIES	VALUES	
Color	Black	
Density	0.95 g/cc	
Initial set at 25°C	20 minutes	
Final set at 25°C	48 hours	
Bond strength	>3 N/mm ²	
Application temperature	+5°C to +50°C	
Service temperature	-10°C to +70°C	
Frost resistance	Excellent	
Resistance to moisture	Good	
Chemical resistance	Resistance to corrosive soil, oil, bases and acids.	
Viscosity	8000 cp at 20°C	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50% relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





POLYASPHALT 60/70

Penetration grade bitumen

Protective and waterproofing coating

CHARACTERISTICS

- ► Hot applied
- ► Excellent barrier against penetration of water
- ► Excellent resistance to chlorides and sulphates
- ► Conforms to the following standards: ASTM D 946, AASHTO M 20, BS 3690



DESCRIPTION

Polyasphalt 60/70 is a penetration grade bitumen used as a paving grade bitumen used for the construction of roads and asphalt pavements. This is also used as a protective and waterproofing coating on concrete surfaces.

FIELDS OF APPLICATION

- waterproofing below ground block work, concrete structures prior to back filling
- road construction and maintenance of flexible pavements

APPLICATION

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil, grease. All surface imperfections and protrusions are to be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable concrete repair mortar.

Application

The bitumen being thermoplastic in nature requires initial heating in order to melt the bitumen in the supplied drum. Applied the hot melt bitumen with suitable means onto the concrete surface as per the required thickness.

COVERAGE

1L/m² for 1mm thickness



CLEANING

Cleaning of tools and equipment used during the application of the bitumen can be done by a suitable cleaner as recommended by the manufacturer.

STORAGE & SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. Shelf life is up to 12 months when stored as per recommendations. Failure to comply with the recommended storage conditions may result in premature deterioration of the product.

HEALTH & SAFETY

Proper PPE should be worn during the application of this product as it contains hot components and may cause severe burn if it comes in contact with the skin. Burns should be provided with immediate medical assistance.

SUPPLY

140kg drum

TECHNICAL DATA		
PROPERTIES	VALUES	TEST STANDARD
Specific gravity at 25°C	1.01	ASTM D 70
Penetration at 25°C, [dmm]	60-70	ASTM D 5
Softening point (R&B), [°C]	47	ASTM D 36
Flash point (COC), [°C]	250	ASTM D 92

All values given are subject to 5-20% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23\,^{\circ}\mathrm{C}$ and $50\,$ % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.







Polycure ACW

Acrylic based white pigmented concrete curing compound

Used to prevent rapid evaporation of water from fresh concrete ensuring uniform hydration, adequate strength development

CHARACTERISTICS

- ▶ Dual protection as curing and sealing compound
- ► Protects concrete from water borne chlorides, sulphates and atmospheric carbon dioxide
- ► Economical, Labour saving, Easy to apply
- ► White pigmented for high curing efficency





DESCRIPTION

Polycure ACW is a non-degradable liquid type of curing and sealing compound based on acrylic and proper wetting agents. Polycure ACW is used to prevent rapid evaporation of water from fresh concrete ensuring uniform hydration, adequate strength development and minimizes plastic and drying shrinkage cracks. This will also act as sealing coat for protecting concrete from the attack of water borne salts and ingress of carbon dioxide from the atmosphere. The cured film further acts as a primer system for subsequent surface finishes. It also provides a dust free surface to the concrete with a reduced incidence of drying shrinkage cracks.

FIELDS OF APPLICATION

A cost effective curing compound as well as surface sealer for fresh concrete. An effective alternative to hessian, water or polyethelyne curing aids.

Polycure ACW is suitable for use on all concrete surfaces and acts as a more effective and economical alternative to separate curing, priming systems.

- in high rise construction where continous wet curing is not possible.
- in areas subjected to high drying winds which require continuous curing.
- surfaces, which requires subsequent finishes.

APPLICATION INSTRUCTIONS

Mix the contents of the drum thoroughly prior to the application in order to remove the sediments. It is recommended that the curing compound is applied after the initial bleed water evaporates and the concrete has achieved its initial set. The application can be done by



ate of has to be

a brush, roller or an airless spray at a coverage rate of $5m^2/L$ For highly porous surfaces, a second coat has to be applied at the same coverage rate.

PRIMER FOR SUBSEQUENT FINISHES

Polycure ACW acts as a primer and bonding agents for the following systems:

- water based emulsion paint systems containing PVA, PVC, and acrylic co-polymers
- tile adhesives based on the above polymers
- bitumen based emulsions or solutions
- cementitious systems

Note:

- concrete curing compound will effectively prevent evaporation of water from concrete, provided it is not puctured or damaged, but will not allow the ingress of water to replenish that is lost by self desiccation.
- where water curing is inconvenient or potable water for curing is not available, sealing fresh concrete surface with curing compound is the best alternate curing method.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air

TDS_Polycure ACW_GCC_0418

condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Polycure ACW 200L drum

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Appearance	White liquid	-
Specific gravity, [g/cc]	1.0±0.05	ASTM D 1475
Flash point	Not applicable	-
Toxicity	Non toxic	-
Applicable standard	ASTM C 309 Type 2, class b, reflective white film, >75% curing efficiency	-
Application temperature, [°C]	5 to 55	-

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.







Polyzinc

Zinc epoxy corrosion protective coating

For the protection of steel reinforcement and metalwork against corrosion.

CHARACTERISTICS

- ► Excellent corrosion prevention properties
- ▶ Quick drying, can be over coated after a short period
- ► Excellent adhesion to steel
- ► Services as primer for various maintenance systems
- ► The zinc content provides an Electro chemical protection



DESCRIPTION

Polyzinc is a single component zinc rich epoxy coating for the protection of steel reinforcement and metalwork against corrosion.

FIELDS OF APPLICATION

- a protective coating to steel reinforcement in concrete repair applications
- as a primer for steel surfaces prior to final coating

APPLICATION INSTRUCTIONS

Surface preparation

All the corroded steel on the repair area should be fully exposed and all loose particles along with rusted scales shall be totally removed. Steel should be cleaned to a bright condition especially at the rear of the exposed bars by wire brushing or grit blasting. Ensure the surface is clean and dry and clear of oil, grease, dust etc.

Mixing

Mix the contents of the pail with a paddle mixer fitted to a slow speed drill to remove any sediment prior to application.

Application

Application can be done by brush. Ensure that the entire steel is coated properly. A second coat is recommended to be applied so that all pin holes are covered completely. The second coat shall be applied only after first coat dries off completely. The application of repair mortars should start immediately after the coating dries.



COVERAGE

Polyzinc will cover 8m²/L/coat for 75 microns DFT.

CLEANING

Tools should be cleaned with Polysolvent immediately after use. Hardened materials can be cleaned mechanically only.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 6 months in unopened condition and if stored as per recommendations. excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

TDS_Polyzinc_GCC_0918

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Color & appearance	Grey viscous liquid	-
Density, [g/cc]	1.6±0.05	ASTM D 1475
Solid content, [%]	60±2	ASTM D 2930
Zinc content in dried film, [%]	> 95	BS 4652
Drying time, [mins]	30	-
Application temp, [°C]	5 to 35	-

All values given are subject to 5-10% tolerance

SUPPLY	
Polyzinc	1.5L
Polysolvent	5L & 20L pails

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.







Internal and external PVC waterstop

High grade PVC resin extrusions that are plasticized and stabilized to offer long life performance in concrete structures against water leakages.

CHARACTERISTICS

- ► High tensile strength & elongation
- ▶ Unique design. Specific ribbed profile for effective water sealing performance
- ▶ Brass eyelets on edge flanges for tying with steel reinforcements (Internal profiles)
- ▶ Heat weldable
- Non toxic. Suitable for use in contact withpotable water
- Prefabricated intersections
- ► Excellent chemical resistance
- Non-staining. Will not discolor concrete or produce electrolytic action
- Does not Contain Asbestos, Chromated copper arsenate and Lead





DESCRIPTION

Polystop water stops are high grade poly vinyl chloride (PVC) resin extrusions that are plasticized and stabilized to offer long life performance in concrete structures against water leakages. The cross section configuration features a multi rib design for an effective grip and tenacious anchor to the concrete and a flexible, hollow center bulb to accommodate moderate expansion and contraction in the concrete. Polystop waterstops are manufactured to meet the most stringent performance specifications and are resistant to abrasion and chemicals.

FIELDS OF APPLICATION

Polystop waterstops are used in conjunction with expansion and construction joints in RCC structures like:

- water reservoirs & storage tanks
- retaining walls, basements, foundations
- subways, tunnels & culverts
- drainage, sewerage & waste water structures
- treatment plants
- swimming pools
- dams, canals

INTERNAL PROFILE DETAILS

Polystop ICJ - Internal Construction Joints

The internal construction joint waterstops is placed in



TDS_Polystop_GCC_1024

the centre of the concrete construction joints. Since this type of waterstop is embedded into the concrete they are designed and incorporated with fins and multiple solid-core ribs along the two lengthwise edges. These fins interlocks the waterstop in the concrete thus providing a superior mechanical bond with the concrete. The ribs are designed with particular angle which anchors with the concrete and further reinforces the mechanical bond. In addition to that angle in the ribs ensures a torturous path for the passage of water.

Polystop IEJ - Internal Expansion Joints

The internal expansion joint waterstop is placed in the centre/internal section of the concrete expansion joint. This waterstop has a central hollow bulb which is designed to allow the cyclical and differential movement in both lateral and transverse direction without excessively stretching the material. For greater versatility and superior mechanical bonding, the waterstop is incorporated with multiple ribs and fins on both the lengthwise edges.

EXTERNAL PROFILE DETAILS

Polystop ECJ - External Construction Joints:

External construction joint waterstop is used at joints of slab on grade or walls that gets backfilled on vertical walls. The profile of this waterstop is flat with multiple ribs and fins along its flanges for better mechanical bond or interlock in the concrete.

Quality for Professionals

Polystop EEJ - External Expansion Joints

External expansion joint waterstop is used in concrete expansion or isolation joints, these are designed with centre bulb with a tear web. These type of waterstop is used where large movements in expected. Tear web keeps concrete out of the bulb during concrete placement. Upon joint movement, the thin tear web ruptures allowing substantial mechanical deformation of center bulb without stressing the material.

APPLICATION INSTRUCTIONS

Fixing internally

Internal and centrally placed waterstops are positioned within the concrete where the centerline of the waterstop is aligned with the centre of the joint. Such waterstops functions as a watertight diaphragm wall against any water leakage. For a proper placement of the waterstop, split formwork is recommended when installing in slabto-slab, slab-to-wall and wall-towall joints. The waterstop is then tied with wires trough the eyelets provided at the end flanges to the reinforcement. This will ensure that the waterstop firmly held in position and is not misaligned or fold during the concrete pour. One half of the waterstop has to be positioned within the first pour and the other half projecting into the second pour. A tight fit between the waterstop and the form is also necessary to prevent excessive leakage of concrete paste, which could lead to honeycombing of the concrete.

Fixing externally

The externally placed waterstop is installed prior to pouring of concrete. The external expansion joint profile is usually loosely laid on top of the compacted grade or mudslab. The stop end form works are then fixed on top of the waterstop. The waterstop can either be nailed or glued into position to avoid displacements during the concrete pour. The external construction joint profile is glued or nailed on to the vertical shutter. The waterstop is so positioned that only the ribbed side is embedded into the concrete.

Jointing

A fully continuous water stop network must be formed throughout. At bends and additional joints, factory welded junctions are to be used when jointing with the placed water stops. Field buttsplices shall be heat fused welded using an appropriate welding knife of voltage ranging between 220-240V(ideally with thermostatically controlled). The edge of the water stop shall be cut with a knife to get an even and sharp finish and aligned in a specially designed fixing jig. The edges will then be positioned in the jig in such a fashion that at least 25mm of water stop protrudes from the jig. Place the welding knife in between the two ends, and when the PVC starts melting (>140°C), beads will start forming around the section. remove the welding knife and press both the ends firmly against each other to form a neat buttsplice. Press the joints against each other for sometime till the PVC cools and forms a strong fusion welded joint.

PRECAUTIONS

- 1. Concrete in and around the waterstop has to be properly compacted in order to ensure a full contact of the waterstop and a water tight seal.
- 2. Surface of the waterstop shall be cleaned of all dirt and cement laitance which can affect the water tight seal with the concrete.
- The clearance between the waterstop and the reinforcement should be at least twice that of the maximum size of the aggregate. this will prevent the formation of voids and honeycomb around the waterstop.
- 4. The waterstop should not be punctured to allow a reinforcement to pass through the waterstop.
- 5. Installed waterstops should be protected from UV.

 Prolonged exposure will make the PVC waterstop brittle.

STORAGE

Store the material in a cool and shaded area. Protect from UV and high temperatures. Prolonged exposure to sunlight and harsh environment will result in deterioration of the product. Keep away from sharp edges to prevent damage.

HEALTH & SAFETY

Polystop is completely non-hazardous and nonflammable. But care should be taken while cutting and welding the joints. Hydrogen chloride vapors will be released during the hot welding, therefore the working area should be properly ventilated and all appropriate PPE gear shall be used.

SUPPLY		
Polystop ICJ	4mm	250mm x 15m, wt 22.5kg# 200mm x 15m, wt 19.5kg# 150mm x 15m, wt 16.5kg#
	10mm	250mm x 15m, wt 49.5kg#
Polystop IEJ	4mm	250mm x 15m, wt 25.5kg# 200mm x 15m, wt 22.5kg# 150mm x 15m, wt 19.5kg#
	10mm	250mm x 15m, wt 57.0kg#
Polystop ECJ	4mm	250mm x 15m, wt 30.0kg# 200mm x 15m, wt 27.0kg# 150mm x 15m, wt 22.5kg#
	10mm	250mm x 15m, wt 58.5kg#
Polystop EEJ	4mm	250mm x 15m, wt 36.0kg# 200mm x 15m, wt 30.0kg# 150mm x 15m, wt 25.5kg#
	10mm	250mm x 15m, wt 69.0kg#
Ancillaries/tools		pre-fabricated junctions, jointing jigs, welding knife 240v

[#] Approximate weight

TDS	
3	

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Width, [mm]	150, 200, 250	-	
Web thickness, [mm]	4, 10	-	
Specific gravity*	≥1.32	-	
Tensile strength,* [N/mm²]	≥15	BS 2782	
Elongation, [%]*	≥300	BS 2782	
Tear resistance*, [N/mm]	≥50	ASTM D 624	
Shore A hardness*	80	ASTM D 2240	
BS softness*	40-50	BS 2782	
Resistance to water pressure @5bar*	No leakage	BS EN 12390 [Part 8]	
Water absorption*, [%]	<0.2	ASTM D 570	
Chemical resistance*	pH 2.5 to 11.5	ASTM D 543	
Suitability with potable water*	Passes (non toxic)	BS 6920	
Standard compliance	BS 2571, CRD-C 572-74	-	

All values given are subject to 5-10% tolerance.

^{*}All values are based on testing of PVC compound.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



droseq

Hydrophilic rubber based on polyurethane

Swellable water bar used for the purpose of sealing joints

PROPERTIES

Hydroseal P is a hydrophilic rubber based on polyurethane, which is available in different sizes. Hydroseal P is used for sealing purposes in civil engineering, structural engineering as well as tunneling for waterpressure up to 5bar. Hydroseal P has a three dimensional polymer structure, which is build up from unstructured polyurethane chains (macromolecules). The elastomeric features arise due to the weak cross linkage of the polymer chains. The swelling ability happens due to hydrophilic polymer resins, which can expand in contact with water in excess of 300% by volume. Hydroseal P is used for sealing of construction joints, restoration of expansion joints, sealing of tubbing part in tunneling, proofing of shafts and pipe penetrations.

APPLICATION INSTRUCTIONS

Sealing of construction joints

For the successful application of Hydroseal P in construction joints, the profile has to be placed into the center of the reinforcement or at least 10 cm away from the concrete flanks. It has to be adhered fully with Bitubond N to the substrate. If necessary the profile can also be nailed onto the concrete. It has to be sure that the profile cannot change its position while concreting. Rough surfaces should be smoothened before adhering the profile. This can be achieved with the application of Polycrete concrete repair products.

Jointing of end and side laps

Joints and lap-over areas are to be fixed with Bitubond N.

STORAGE & SHELF LIFE

Store all material between 10 and 25°C in a cool, covered dry place. Do not expose the containers to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.



HEALTH & SAFETY

As with all construction chemical products caution should be always be exercised whilst usage. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately and seek medical advice. Should any of the product be accidentally swallowed do not induce vomiting, but call for medical assistance immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and contents details.

For any further information please refer to the material safety datasheet

SUPPLY

Hydroseal P	10x20mm	10 numbers of 5m
	20x20mm	rolls in one box 8 numbers of 5m
		rolls in one box

TDS_Hydroseal P_GCC_0624

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Color	Blue		
Density, [g/cm³]	Approx. 1.0	ASTM D 792	
Shore 'A' Hardness	Approx. 30	ASTM D 2240	
Hydrostatic pressure,			
[m]	>50 (5bar)	BS EN 12390	
Swelling rate, [%]	>300		
	by volume	ASTM D 590	
Swelling retarding	Yes		
Profile types	Rectangle and box profiles		
All 1 : 1 - 5 100/ 1			

All values given are subject to 5-10% tolerance.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

Bitutape 150 PVC

Anti corrosive pipe wrapping tape

High performance anti-corrosive pipe wrapping tape buried pipeline, pipe joints.

CHARACTERISTICS

- ► Easy to apply
- ► Excellent adhesion
- ► High strength
- Flexibility
- ► Resistance to Acid & Alkali
- ► Excellent impact resistance
- Do not contain asbestos, Chromated copper arsenate and lead







DESCRIPTION

Bitutape 150 PVC is a high performance anti-corrosive pipe wrapping tape designed for use on buried pipeline, pipe joints, fittings and tie bars where impact or stress is high.

APPLICATION INSTRUCTIONS

Surface preparation

Remove any dirt, oil, grease, rust by suitable methods. Remove any metal burrs or weld spatter. The minimum requirement for surface preparation of pipe/steel surface is by mechanical/power wire brushing to remove any rust scales. Grit blasting can also be done in heavily contaminated areas.

Priming

Bitutape Primer* (solvent based bitumen primer) shall be used for priming the steel surface prior to the application of the wrapping tape. Stir the contents of the primer for 1-2 minutes to remove any sediment. Apply the primer at the rate of 4-6m²/L with a brush or roller evenly to ensure complete sealing of all small undulations and imperfections, particularly around weld beats. Reseal the containers when not in use.

Wrapping

Application instructions are for guideline only and are subjected to alterations for specific project requirements. Wrapping should not commence until the primed surface has become touch dry. Apply strips of tape 100mm



TDS_Bitutape 150PVC_GCC_0621

1

wide along the weld beads and press firmly. Peel back 150 to 300 mm of the release film and apply the tape, adhesive side, to the pipe. The angle of the tape must be such as to produce the specified overlap. Apply only sufficient tension to ensure good conformation avoiding air pockets and bridging. Ensure end lap area of at least 150 mm when splicing the tapes. Backfill with care. Use of an Bitustick R protection membrane is recommended to prevent any damage from backfilling. Avoid use of rocky or agglomerated backfill.

GENERAL

Surface preparation, priming or wrapping should not take place when the substrate is wet. Do not carry out work when the surface temperature is less than 5°C. All sources of ignition must be extinguished or removed before carrying out priming operation. Adequate ventilation must also be ensured. Store the tapes at temperatures not exceeding 30°C and avoid excessive load stacking. During the wrapping application it is important to maintain an even tension whilst controlling the overlap to prevent air entrapment, which could lead to corrosion at a later stage. The tapes are best applied by machine, either hand powered for small runs or mechanically propelled for longer runs. Bitutape 150 PVC range of tapes is normally supplied in 10 m lengths. For machine wrapping these

Quality for Professionals

lengths can be increased based on special request, to suit the project and reduce the number of roll changes.

STORAGE & SHELF LIFE

Bitutape 150 PVC rolls should be stored under cover, out of direct sunlight and protect from extreme temperatures. storage area should be cool, dry, well – ventilated and regularly monitored for temperature and major sources of heat. shelf life is up to 12 month when stored as per recommended storage conditions.

HEALTH & SAFETY

As with all bitumen products caution should always be exercised. Protective clothing such as gloves and goggles should be worm. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the product be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY		
Bitutape 150	PVC	10m x 50mm, wt 0.75kg# 10m x 100mm, wt 1.5kg# 10m x 150mm, wt 2.25kg# 10m x 225mm, wt 3.38kg#
Bitutape Prim	ner	20L pail
Bitustick R	1.6mm	1m x 10m wt 16kg#
		1m x 20m wt 32kg#
	2mm	1m x 10m wt 21kg#
Bitutape Putty	y-K	20kg pail
# Approximate weights		

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Backing color	Black/Blue		
Backing type	PVC		
Backing thickness, [microns]	500	ASTM D 1000	
Compound thickness, [mm]	0.9-1.0	ASTM D 1000	
Total thickness, [mm]	1.4-1.5	ASTM D 1000	
Tensile strength [film], [N/mm ²]	>15	ASTM D 638	
Elongation [film], [%]	>270	BS 2782	
Tear resistance [film], [N]	>35	ASTM D 1004	
Adhesion to primed steel,[N/mm]	>2.75	ASTM D 1000	
Adhesion to self, [N/mm]	>2.75	ASTM D 1000	
Impact resistance, [N.m]	>15	DIN 30672	
Di electric strength, [KV]	>31	BS 2782	
Insulation resistance, [giga ohms/m²]	3.2	ASTM D 257	
Volume resistivity [Ohms.m]	2.2 x 10 ¹²	ASTM D 257	
Cathodic disbondment resistance [mm]	<10	ASTM G 8	
Water vapor trans- mission, [g/m²/24hours]	< 0.4	ASTM E 96	
Water absorption [film], [%]	<0.2	ASTM D 570	
Resistance to	Excellent	ASTM G 21	
Bacterial attack application temp, [°C]	5 to 55	-	
Service temp, [°C]	-20 to 80	-	
All			

All values given are subject to 5-10% tolerance



Bitutape 165

Anti corrosive pipe wrapping tape

High performance anti-corrosive pipe wrapping tape buried pipeline, pipe joints.

CHARACTERISTICS

- ► Easy to apply
- Excellent adhesion
- High strength
- Flexibility
- Resistance to Acid & Alkali
- Excellent impact resistance







DESCRIPTION

Bitutape 165 PVC is a high performance anti-corrosive pipe wrapping tape designed for use on buried pipeline, pipe joints, fittings and tie bars where impact or stress is high.

APPLICATION INSTRUCTIONS

Surface preparation

Remove any dirt, oil, grease, rust by suitable methods. Remove any metal burrs or weld spatter. The minimum requirement for surface preparation of pipe/steel surface is by mechanical/power wire brushing to remove any rust scales. Grit blasting can also be done in heavily contaminated areas.

Priming

Bitutape Primer* (solvent based bitumen primer) shall be used for priming the steel surface prior to the application of the wrapping tape. Stir the contents of the primer for 1-2 minutes to remove any sediment. Apply the primer at the rate of 4-6m²/L with a brush or roller evenly to ensure complete sealing of all small undulations and imperfections, particularly around weld beats. Reseal the containers when not in use.

Wrapping

Application instructions are for guideline only and are subjected to alterations for specific project requirements. Wrapping should not commence until the primed surface has become touch dry. Apply strips of tape 100mm wide along the weld beads and press firmly. Peel back 150 to 300 mm of the release film and apply the tape, adhesive



TDS_Bitutape 165PVC_GCC_0621

side, to the pipe. The angle of the tape must be such as to produce the specified overlap. Apply only sufficient tension to ensure good conformation avoiding air pockets and bridging. Ensure end lap area of at least 150 mm when splicing the tapes. Backfill with care. Use of an Bitustick R protection membrane is recommended to prevent any damage from backfilling. Avoid use of rocky or agglomerated backfill.

GENERAL

Surface preparation, priming or wrapping should not take place when the substrate is wet. Do not carry out work when the surface temperature is less than 5°C. All sources of ignition must be extinguished or removed before carrying out priming operation. Adequate ventilation must also be ensured. Store the tapes at temperatures not exceeding 30°C and avoid excessive load stacking. During the wrapping application it is important to maintain an even tension whilst controlling the overlap to prevent air entrapment, which could lead to corrosion at a later stage. The tapes are best applied by machine, either hand powered for small runs or mechanically propelled for longer runs. Bitutape 165 PVC range of tapes is normally supplied in 10 m lengths. For machine wrapping these lengths can be increased based on special requests, to suit the project and reduce the number of roll changes.

STORAGE & SHELF LIFE

Bitutape 165 PVC rolls should be stored under cover, out of direct sunlight and protect from extreme temperatures. Storage area should be cool, dry, well – ventilated and regularly monitored for temperature and major sources of heat. Shelf life is up to 12 month when stored as per recommended storage conditions.

HEALTH & SAFETY

As with all bitumen products caution should always be exercised. Protective clothing such as gloves and goggles should be worm. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the product be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY			
Bitutape 165PVC		10m x 50mm, wt 0.825kg# 10m x 100mm, wt 1.65kg# 10m x 150mm,wt 2.475kg# 10m x 225mm, wt 3.71kg# (Rolls available in 30m & 60m length upon request)	
Bitutape Prim	ier	20L pail	
Bitustick R 1.6mm		1m x 10m wt 16kg# 1m x 20m wt 32kg# 1m x 10m wt 21kg#	
Bitutape Putty-K		20kg pail	
#Approximat	te weight		

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARD		
Backing color	Black/Blue	-		
Backing type	PVC	-		
Backing thickness, [microns]	750	ASTM D 1000		
Compound thickness, [mm]	0.75-0.9	ASTM D 1000		
Total thickness, [mm]	1.5 - 1.65	ASTM D 1000		
Tensile strength [film], [N/mm²]	>18	ASTM D 638		
Elongation [film], [%]	270	BS 2782		
Tear resistance [film], [N]	>45	ASTM D 1004		
Adhesion to primed steel, [N/mm]	>2.75	ASTM D 1000		
Adhesion to self, [n/mm]	>2.75	ASTM D 1000		
Impact resistance, [N.m]	>15	DIN 30672		
Di electric strength, [KV]	>35	BS 2782		
Insulation resistance, [giga ohms/m²]	3.2	ASTM D 257		
Cathodic disbondment resistance, [mm]	<10	ASTM G 8		
Water vapor trans- mission, [g/m²/24hrs]	< 0.4	ASTM E 96		
Water absorption [film], [%]	<0.2	ASTM D 570		
Resistance to bacterial attack	Excellent	ASTM G 21		
Application temp, [°C]	5 to 55	-		
Service temp, [°C]	-20 to 80			
All values given are subject to 5 10% telerance				

All values given are subject to 5-10% tolerance





Bitutape Prime

Solvent based bitumen primer

Quick drying bituminious primer to facilitate pipe wrapping tapes applications

CHARACTERISTICS

▶ Does not Contain Asbestos, Chromated copper arsenate and Lead

DESCRIPTION

Bitutape Primer is a premium quality, quick drying, solvented bituminious primer conforming to ASTM D 41, used for priming pipes prior to application of Bitutape* pipe wrapping tape systems. Bitutape primer do not contain asbestos, Chromated copper arsenate and lead.







FIELDS OF APPLICATION

Bitutape Primer provides an effective primer coat prior to application of anti-corrosive pipe wrapping tapes. Bitutape Primer is resistant to concentrations of alkalis and acids and can withstand prolonged oxidation.

SPECIFICATION COMPLIANCE

Bitutape Primer conforms to the requirements of ASTM D 41 $\,$

APPLICATION INSTRUCTIONS

Surface preparation

Surfaces must be structurally sound, clean, dry and free from dirt, dust, oil, grease, curing compounds, laitance and loose debris. Steel surfaces should be free from scale and rust and preferably cleaned by grit blasting or rotary wire brush.

Application

Bitutape Primer is ready to apply and only require slight manual stirring prior to application. Bitutape primer is usually applied straight from the pail/ drum with standard brush, squeegee or airless spray equipment at an average coverage rate of 4-6 m²/L allow primer to dry before application of Bitutape moulding paste or Bitutape pipe wrapping tapes.

STORAGE & SHELF LIFE

Store in a dry and shaded area. keep away from direct sunlight and protect from extreme temperatures. The shelf



life is 12 months in unopened conditions if stored as per recommendation.

HEALTH & SAFETY

Bitutape Primer contains flammable solvents. Keep away from naked flames or direct heat. Always provide adequate ventilation especially on confined areas. Any skin contamination can be removed with water and soap.

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS	
Flash point, [°C]	38	ASTM D 92	
Tack free time @30°C,		ASTM C 679	
[minutes]	30		
Color	Black	-	
Application temp, [°C]	5 to 45	-	

All values given are subject to 5-10% tolerance

SUPPLI

Bitutape Primer 2	20L pail
-------------------	----------

TDS_Bitutape Primer_GCC_102

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Bitutape Putty-K

Moulding putty

Mastic putty for smoothening profiles to facilitate pipe wrapping tapes applications.

CHARACTERISTICS

- ► Provides a smooth and workable profile on pipe fittings such as flanges, valves, spigot and socket type joints, bolted couplings and any intricate contours
- ► Used for hand moulding, thereby making the application simple and fast to use
- ► Provides excellent adhesion keeping the putty in place without slumping or sagging
- ▶ Do not contain asbestos, Chromated copper arsenate and lead



DESCRIPTION

Bitutape Putty-K is a chemical resistant oil based mastic putty used for smoothening of tough & intricate profiles and filling of voids and crevices for enhancing the waterproofing efficiency of Bitutape* anticorrosive pipe wrapping tape systems.

APPLICATION INSTRUCTIONS

Surface preparation

Surfaces should be completely devoid of dust, oil, grease, rust, mill scale, weld spatter or any other loose debris, which would affect adhesion.

Priming

surface primed with Bitutape primer* should be completely touch-dry before application of paste.

Wrapping

Neatly pack the paste into the joints and crevices to provide the desired profile and contour to facilitate wrapping. Wrap with specified grade and width of Bitutape pipe Wrapping tape.

CLIMATIC CONDITIONS

Designed to cater for application in tropical and temperate climatic conditions.

STORAGE & SHELF LIFE

Store in a dry and shaded area. Keep away from direct sunlight and protect from extreme temperatures. The shelf life is 24 months in unopened conditions if stored in AC environment in tropical climates.



HEALTH & SAFETY

Bitutape Putty-K is solvent free therefore non hazardous in use. Any skin contamination can be removed with water & soap.

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Color	Natural Tan - Grey	
Solvent	None	
Flash point	Not applicable	
Sp. gravity, [g/cc]	1.9±0.05	ASTM D 70
Solid content, [%]	100	ASTM D 2369
Dry time	Not applicable	

All values given are subject to 5-10% tolerance

SUPPLY

Bitutape Putty-K 20kg pails

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



Bitutape

Twin sided adhesive bitumen tape

Non-reinforced twin side adhesive bitumen membrane.

CHARACTERISTICS

Bitutape TS is mainly used as an adhesive for the fixing of Bituboard protecting boards to the Bitustick range of self adhesive waterproofing membranes. Bitutape TS is also ideal for sealing of pipe joints in concrete structures and other corner joints.





DESCRIPTION

Bitutape TS is a non-reinforced twin side adhesive bitumen membrane which comprises of polymerized bitumen sandwiched between a plastic release film on either side.

APPLICATION INSTRUCTIONS

The substrate to which Bitutape TS needs to be applied should be free of oil, water and dust. The presence of any of these contaminants affects the adhesive properties of the membrane. Cut the membrane into the desired width and length and stick it on to the surface. Remove the release film form the order side and then stick the boards on place.

HANDLING

Bitutape TS are supplied in rolls of 10 m length and 50 mm width. The membranes can be unloaded by hand or other convenient means, but making sure the absence of any protruded sharp edges nearby to avoid punctures.

STORAGE

Bitutape TS range of tapes have to be stored in a shaded are on wooden pallets neatly covered by any thick fabric like tarpaulin sheets tied and secured properly to ensure no excessive exposure to sunlight.



DISPOSAL

Bitutape TS is a non-hazardous, non-flammable material and therefore can be disposed to in any regular disposal areas. Bitutape TS should be disposed on after wrapping with paper, plastic or clothe as the modified material has tendency to soften under heat and pressure, which would make further handling very tough.

HEALTH AND SAFETY

Bitutape TS contains a tacky Bitumen compound which while applied can adhere to human skin. Such stains of Bitumen can be removed by using a cloth dipped in light solvents. Incase the effected area is sensitive like the eye please contact the company physician for advice.

TDS_Bitutape TS_GCC_0125

TECHNICAL PROPI	RTIES
Roll length, [m]	10
Roll Width, [mm]	50/100
	(other sizes available on request)
Thickness, [mm]	1.5
Softening Point, [°C]	>105
Elongation, [%]	≥1000
Hydrostatic pressure	
@ 5 bar	No leakage

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



me

Solvent based bitumen primer

Low viscoused primer to improve the adhesion of bitumen based membranes and coatings.

CHARACTERISTICS

- ▶ Improves the adhesion of bitumen based sheet membranes and coatings
- Cold applied, does not require heating
- ► Binder for dust particles
- Anti corrosive
- Conforms to ASTM D41 Asphalt primer for roofing, damp proofing and waterproofing
- ▶ Do not contain asbestos, Chromated copper arsenate and lead







DESCRIPTION

Polyprime SB is a quick drying solvent based low viscosity bitumen primer. It is used as a primer coat on masonry and concrete substrates to improve the adhesion of bitumen based membranes and coatings. Polyprime SB is low in viscosity, which allows it to penetrate into the concrete pores and improve the adhesion between the membrane and the concrete surface. In addition to that, the primer also acts as a binder for the dust particles which gets accumulated on the concrete surface even after cleaning.

FIELDS OF APPLICATION

Polyprime SB is used as a primer and sealer coat prior to the application of bitumen based waterproofing membranes and coatings.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the primer is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, nail head protrusions, structurally unsound and friable concrete shall be removed and repaired with a suit-able Polycrete* concrete repair mortar. The surface must be dry before priming with Polyprime SB.



TDS_Polyprime SB_GCC_1220

Application

Mix the contents of the pail or drum for a few minutes to remove any sediments. apply the primer $@4-6 \text{ m}^2/\text{L}$ to a clean smooth and dry surface by brush/roller. Allow the primer to dry prior to the application of the membrane. For highly porous surfaces application of a second coat is recommended.

COVERAGE

The coverage is 4-6 m²/L/coat. However, the coverage will depend on the porosity of the substrate. In order to ascertain the exact coverage, a trial application is carried out at site.

STORAGE & SHELF LIFE

The pails and drums must be stored in a covered, dry and shaded area, away from direct sunlight, UV and other sources of heat and protected from extreme temperatures. The shelf life of the product is up to 12 months if stored as per the recommendations. Excessive exposure to sunlight and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

Polyprime SB contains volatile solvent with relatively low flash point. Keep away from naked flames or direct heat.

Avoid inhalation of vapors and ensure there is adequate ventilation in the work place. Gloves, protective masks and goggles should be worn during application. If swallowed seek medical attention immediately.

SUPPLY	
Polyprime SB	20L pail & 200L drum
Polycrete	25kg bag

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Density, [g/cc]	0.85-0.95	ASTM D 1475
Solid content, [% by wt]	>40	ASTM D 1644

All values given are subject to 5-10% variation

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



me

Water based bitumen primer

Emulsified bitumen primer designed for applications as a primer and sealer coat.



CHARACTERISTICS

- ▶ Economical
- Solvent free
- ► Anti corrosive
- ► Cold applied. Easy to apply
- Binder for dust particles





DESCRIPTION

Polyprime WB is an emulsified bitumen based primer designed for applications as a primer and sealer coat.

FIELDS OF APPLICATION

Polyprime WB is used as a primer coat prior to the application of torch applied bituminous waterproofing membranes and oxidized bitumen.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 55°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the bitumen coating is as follows:

Surface preparation

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable Polycrete* concrete repair mortar.

Application

The surface must be dry before priming with Polyprime WB. thoroughly mix the contents of the drum so that the there is no settlement due to storage. The primer can be applied by brush or roller @4-5 m²/L/coat. For dry and porous surfaces apply a second coat. The second coat shall be applied only after the first coat dries off completely. The primer should be allowed to dry naturally before the application of subsequent layers.



COVERAGE

 $4-5 \text{ m}^2/L$

HEALTH & SAFETY

As with all Bitumen products caution should always be exercised. Protective clothing such as gloves and goggles should be worn (see packaging for specific instructions. Treat any splashes to the skin or eyes immediately with fresh water. Should any of the products be accidentally swallowed, do not induce vomiting. Call for medical assistance immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and content details.

STORAGE & SHELF LIFE

The pails and drums must be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life of the product is up to 12 months if stored as per recommendations. Excessive exposure to sunlight an UV will result in the deterioration of the quality of the product and reduce its shelf life.

SUPPLY

Polyprime WB

20L pail & 200L drum

TECHNICAL SPECIFICATION			
ROPERTIES	VALUES	TEST STANDARDS	
Form	Thick viscous liquid	-	
Color	Brown - Black	-	
Density, [g/cc]	1.00 <u>+</u> 0.05	ASTM D 1475	
Solid content, [% by wt]	40 <u>+</u> 5	ASTM D 1644	
Tak free time approx. [hours]	1		
Applications temperature, [°C]	+5 to +55		
[% by wt] Tak free time approx. [hours] Applications	1 +5 to +55		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



Watertite CL 252

Sealing tape

Sealing tape for the waterproof bridging of expansion and connection joints

CHARACTERISTICS

- ▶ Waterproof
- ► Flexible
- ▶ Permanent bond
- ► Tearproof
- ▶ Non-ageing







SCOPE OF USE

For waterproof bridging of expansion and edge joints, pipe entries, floor drains and room corners in combination with waterproof flexible sealing products Watertite CL 252 under ceramic tile coverings.

For indoor and outdoor use.

For use on floors and walls.

APPLICATION

First, apply a layer of the selected sealing product, embed the sealing tape or sealing collar – with expansion joints form a loop, press and spread a sealant layer on top (do not cover the entire surface area).

PLEASE NOTE

Store the above-mentioned products only in dry conditions and at temperatures of $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$. Observe the warnings-, safety- and waste advice given in the safety data sheet.



SHELF LIFE

Unlimited if stored in a dry place.

SUPPLY

Watertite CL 252 100mm x 50m

TECHNICAL DATA

Base Polypropylen vlies

Dimensions (mm): 100

Temperature resistance: [°C] 30-100

TDS_Watertite CL 252_GCC_0519

Al Hosan

Bituminous roofing felt

Tough, flexible membrane with excellent elongation properties

ADVANTAGES

- ► Excellent elongation.
- ► Polymer modification gives long term flexibility in harsh climatic conditions.
- ► Raditional application for acceptance by on site labour.
- ► Extremely durable.
- ► Long term cost efficiency.







DESCRIPTION

Al Hosan consists of 2 layers of HDHT polyethylene film with polymer modified bitumen. A unique technology involving polymerization to the polymers used in the blend resulting in a tough yet flexible membrane with excellent elongation properties

USES

Al Hosan membranes are used as water-proofing or damp proofing membranes intended for concrete protection. It may be used for horizontal and vertical application and as a damp proof course for tanking below ground structures, subways and retaining walls

APPLICATION

Surface preparation

A smooth, regular and dry surface is always a must for good application. The substrate should be completely free of any protrusions or cavities. The presence of oily substances, frost or other moisture should be completely avoided.

Application

The installation procedures are to be as follows:

- 1. Unroll only the required length, and cut the piece to the desired shape and size.
- 2. Place the pieces of membrane on the area to be covered, and check whether they match with the profile of the marked substrate.



3. Al Hosan can be placed either by pour and roll method or by the use of a contact adhesive for vertical areas.

4. Place a Bituboard on top of the membrane soon after the application in order to prevent any damage from exposure to sunlight, backfilling.

HANDLING

Al Hosan membranes are supplied in rolls of width 1m and lengths of 15m/20m. The membranes can be unloaded by hand or any other convenient means, but ensure the absence of any sharp or protruding edges within close proximity to avoid puncturing the membrane.

STORAGE

Al Hosan membranes must be stored in a shaded area on wooden pallets neatly covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight.

DISPOSAL

Al Hosan is a non-hazardous, non-flammable material and therefore can be disposed of in any regular disposal area. Al Hosan should be disposed of only after wrapping with paper, plastic or cloth as the modified material has TDS_AI Hosan_RTL_0818

tendency to soften under heat and pressure, which would make further handling very difficult.

HEALTH AND SAFETY

Al Hosan contains a tacky bitumen compound and during application can adhere to human skin. Bitumen stains can be removed by using a cloth dipped in a light solvent. In case the affected area is sensitive, like the eye.

TECHNICAL DATA		
PROPERTIES	VALUES	TEST METHOD
Roll length, m	20/15	UEAtc
Roll width, m	1	UEAtc
Roll weight, lb	40/30	UEAtc
Coating asphalt softening point (R&B), ° C penetration at 25° C	Polymer Modified Asphalt > 115 20-30	ASTM D 36 ASTM D 5
Tensile strength (L/T), N/5cm	130/60	UEAtc
Elongation at break (L/T), %	200/300	UEAtc
Tear resistance (L/T), N	80/50	UEAtc

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Polyproof Ultra Plus TS

Single-sided, sanded, self-adhesive HDPE tape

DESCRIPTION

Polyproof Ultra Plus TS is single-sided, self-adhesive tape with sanded finish to be used in conjunction with the Polyproof Ultra FB system. The carrier is coated with a pressure sensitive adhesive with excellent adhesion to the Polyproof Ultra Plus membrane.

FIELDS OF APPLICATION

 To repair damages of the Polyproof Ultra Plus membrane as part of the Polyproof Ultra FB system

APPLICATION INSTRUCTIONS

The substrate to which Polyproof Ultra Plus TS needs to be applied should be free of oil, water, and dust. The presence of any of these contaminants affects the adhesive properties of the tape. Remove the sand from the surface of the existing Polyproof Ultra Plus membrane by using a scraper (use hot air gun for easier removal) where the tape needs to be applied. Cut the tape into the desired width and length and stick it on to the surface by removing the release film. The use of an iron roller over the tape will enhance the bonding. All the edges of the tape shall be further sealed with Polyproof EPU sealing compound.

STORAGE & SHELF LIFE

Store Polyproof Ultra Plus TS in dry and clean conditions and in its original, closed packaging away from sources of chemical contamination, damage, heat, and sunlight. In tropical climates, store in air-conditioned rooms. Shelf life is up to 12 months if stored in accordance with the manufacturer's recommendations. Exercise caution when lifting, moving, transporting, storing & handling to avoid puncture and physical damage.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Polyproof Ultra Plus TS contains an adhesive on the surface which can stick to human skin during application. Such residues can be removed by using a cloth dipped in a suitable cleaner. Seek medical assistance immediately if any accidents occur on site.



SUPPLY

Polyproof Ultra Plus TS 20m x 100mm x 1mm, 2.8kg#
Polyproof Ultra Plus 20m x 100m x 1.2mm, 55kg#
Polyproof EPU 4L, 4.92kg#

#Approximate weight

TECHI	NICAL S	SPECIFI	CATION

PROPERTIES	VALUES	TEST STANDARDS
Nominal thickness, [mm]	1.0	ASTM D 3652
Tensile strength,[N/mm²]	>10	ASTM D 412
Elongation at break, [%]	>10	ASTM D 412
Peel adhesion on Polyproof Ultra Plus, [N/mm]	>2.5	ASTM D 903
Hydrostatic pressure resistance at the joints of Polyproof Ultra Plus sealed with Polyproof Ultra Plus TS, [7bar or (70m)]	No leakage	ASTM D 5385
Application temperature, [°C]	5 to 45	
*All values given are subj	ect to 5-20%	tolerance.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organizations and trade associations as well as the respective standards. The characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require manufacturer's written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of products, is based on the manufacturer's professional experience. As materials and conditions may vary with each intended application, sufficient tests are to be conducted to check the suitability of products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of willful misconduct or gross negligence on the part of the manufacturer. This technical data sheet supersedes all previous editions relevant to this



roof Ultra TS

Single-sided, plain finish, self-adhesive HDPE tape

DESCRIPTION

Polyproof Ultra TS is a single-sided plain finish selfadhesive tape, protected with a release liner to be used in conjunction with the Polyproof Ultra FB system. The carrier is coated with a pressure sensitive adhesive on one side with excellent adhesion to the Polyproof Ultra membrane.

FIELDS OF APPLICATION

 Corner detailing and repair of the Polyproof Ultra membrane as part of the Polyproof Ultra FB system

APPLICATION INSTRUCTIONS

The substrate to which Polyproof Ultra TS needs to be applied should be free of oil, water and dust. The presence of any of these contaminants affects the adhesive properties of the tape. Cut the tape into the desired width and length and stick it on to the surface by removing the release film. Use an iron roller over the tape to enhance the bonding.

STORAGE & SHELF LIFE

Store Polyproof Ultra TS in dry and clean conditions and in its original, closed packaging away from sources of chemical contamination, damage, heat and sunlight. In tropical climates, store in air-conditioned rooms. Shelf life is up to 12 months if stored in accordance with the manufacturer's recommendations. Exercise caution when lifting, moving, transporting, storing & handling to avoid puncture and physical damage.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Polyproof Ultra TS contains an adhesive on the surface which can stick to human skin during application. Such residues can be removed by using a cloth dipped in a suitable cleaner. Seek medical assistance immediately if any accidents occur on site.

SUPPLY

Polyproof Ultra TS 30m x 100mm x 0.35mm, 1.4kg# Polyproof Ultra 20m x 1.5m x 1.2mm, 42kg #

#Approximate weight



TDS Polyproof-Ultra-TS GCC 042

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Nominal thickness,		
mm	0.35	ASTM D 3652
Tensile strength, [N/mm ²]	>8	ASTM D 412
Elongation at break, [%]	>80	ASTM D 412
Peel adhesion on Polyproof Ultra, [N/mm]	>2	ASTM D 903
Application temperature, [°C]	5 to 45	

*All values given are subject to 5-20% tolerance.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organizations and trade associations as well as the respective standards. The characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require manufacturer's written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of products, is based on the manufacturer's professional experience. As materials and conditions may vary with each intended application, sufficient tests are to be conducted to check the suitability of products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of willful misconduct or gross negligence on the part of the manufacturer. This technical data sheet supersedes all previous editions relevant to this product.



Polyproof Ultra TSD

Double-sided, self-adhesive HDPE tape

DESCRIPTION

Polyproof Ultra TSD is a double-sided, self-adhesive HDPE tape, protected with a release liner to be used in conjunction with the Polyproof Ultra FB system. The carrier is coated with a pressure sensitive adhesive on both sides with excellent adhesion to the Polyproof Ultra Plus membrane.

FIELDS OF APPLICATION

- End overlaps on the Polyproof Ultra FB system
- Pile head, penetrations, and corner detailing on the Polyproof Ultra FB system

APPLICATION INSTRUCTIONS

The substrate to which Polyproof Ultra TSD needs to be applied should be free of oil, water and dust. The presence of any of these contaminants affects the adhesive properties of the tape. Cut the tape into the desired width and length and stick it to the surface by removing the release film. Use an iron roller over the tape to enhance the bonding.

STORAGE & SHELF LIFE

Store Polyproof Ultra TSD in dry and clean conditions and in its original, closed packaging away from sources of chemical contamination, damage, heat and sunlight. In tropical climates, store in air-conditioned rooms. Shelf life is up to 12 months if stored in accordance with the manufacturer's recommendations. Exercise caution when lifting, moving, transporting, storing & handling to avoid puncture and physical damage.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Polyproof Ultra TSD contains an adhesive on the surface which can stick to human skin during application. Such residues can be removed by using a cloth dipped in a suitable cleaner. Seek medical assistance immediately if any accidents occur on site

SUPPLY

Polyproof Ultra TSD 20m x 100mm x 0.6mm, 1.6kg# Polyproof Ultra Plus 20m x 100m x 1.2mm, 55kg# #Approximate weight



TECHNICAL SPECIFICATION	
-------------------------	--

PROPERTIES	VALUES	TEST STANDARDS
Nominal thickness,		
[mm]	0.6	ASTM D 3652
Tensile strength,		
$[N/mm^2]$	>3	ASTM D 412
Elongation at break,		
[%]	>100	ASTM D 412
Peel adhesion on		
Polyproof Ultra Plus,	>3	ASTM D 903
[N/mm]		
Application		
temperature, [°C]	5 to 45	

*All values given are subject to 5-20% tolerance.

TDS_Polyproof-Ultra-TSD_GCC_0424

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organizations and trade associations as well as the respective standards. The characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require manufacturer's written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of products, is based on the manufacturer's professional experience. As materials and conditions may vary with each intended application, sufficient tests are to be conducted to check the suitability of products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of willful misconduct or gross negligence on the part of the manufacturer. This technical data sheet supersedes all previous editions relevant to this product.



Polyproof EPU

Two-component, hybrid polyurethane based, flexible sealing compound

DESCRIPTION

Polyproof EPU is a cold-applied, elastomeric, two-component hybrid polyurethane-based sealing compound designed for detailing and repairing the Polyproof Ultra FB system and for filling imperfections on concrete surfaces.

CHARACTERISTICS

- Easy to apply
- Can be applied on vertical surfaces
- Excellent resistance to chemicals acids, alkalis, salts, and other corrosive materials
- Strong adhesion to concrete
- Shrinkage compensated and crack resistant
- · Highly flexible

FIELDS OF APPLICATION

- Corner detailing, sealing of overlaps and pile heads of the Polyproof Ultra FB system
- Repair of the Polyproof Ultra Plus HDPE membrane
- Repair material for defects such as honeycombs, concrete blowholes, etc on concrete surfaces including vertical applications

APPLICATION INSTRUCTIONS

Pour the entire content of component B into the component A container and mix thoroughly and continuously for 2 to 3 minutes with a heavy-duty paddle mixer fitted to a high torque slow speed (300-400 rpm) drill to achieve a homogenous mixture. Polyproof EPU is supplied in preweighed packs and part mixing is not recommended, as the cured product will not achieve its full properties even if there is a small variation in the mixing proportions. Using a scraper, apply the mixed sealing compound to the intended areas. The material should be applied to a minimum thickness of 2mm.

- Avoid using on surfaces that are covered in dust or flaking material
- Avoid prolonged exposure to UV rays
- Avoid using on surfaces that are damp or wet
- Do not apply on wet or damp surfaces
- Avoid using on surfaces that have been contaminated by oil, grease, or release agents
- It is highly recommended to apply Polyproof EPU in the morning and/or in the evening during summer months, as extremely hot climates might reduce the products pot life



TDS Polyproof-EPU GCC 0424

COVERAGE

2.15 L/m²/2mm DFT

STORAGE & SHELF LIFE

Store Polyproof EPU in its original, closed packaging, in air conditioned rooms and away from sources of chemical contamination, damage, heat, and sunlight and in airconditioned rooms. Shelf life is up to 6 months when stored between 5 to 30°C in accordance with the manufacturer's recommendations. Exercise caution when lifting, moving, transporting, storing & handling to avoid any damage. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and will reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, seek medical assistance immediately

SUPPLY

Polyproof EPU

2L, 2.48kg#

#Approximate weight

TECHNICAL SPE	TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARDS			
Mixed density, [g/cc]	1.23±0.05	ASTM D 1475			
Color & appearance	Off white & thixotropic (other colors available upon request)				
Pot life @ 25°C, [minutes]	~60	ASTM D 2471			
Tack free time @ 25°C, [minutes]	~210	ASTM C 679			
@ 40°C, [minutes]	~60	ASTM C 679			
@ 70°C, [minutes]	~25	ASTM C 679			
Solid content by volume, [%]	~93	ASTM D 2697			
Tensile strength, [N/mm²]	>6	ASTM D 412			
Elongation at break, [%]	>130	ASTM D 412			
Tear strength, [kN/m]	>20	ASTM D 624			
Pull off strength to concrete, [N/mm²]	>2.5	ASTM D 4541			
Peel adhesion on Polyproof Ultra Plus, [N/mm]	>1.0	ASTM D 903			
Low temperature flexibility, [°C]	No crack at -25	5 ASTM D 1970			
Chemical resistance	Resistant to 5% sodium chloride 5% magnesium sulphate, 5% potassium sulph 5% calcium chl 5% magnesium 10% calcium hy 5% sodium hydronical sodium sulph 5% sodium hydronical sodium sulph s	nate, loride chloride, rdroxide,			
Hydrostatic pressure resistance, [7bar or (70m)]	No leakage	BS EN 12390-8			
Application temperature, [°C]	5 to 45				
Service temperature, [°C]	-25 to 70				
* A II I .	1	1			

*All values given are subject to 5-20% tolerance.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organizations and trade associations as well as the respective standards. The characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require manufacturer's written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of products, is based on the manufacturer's professional experience. As materials and conditions may vary with each intended application, sufficient tests are to be conducted to check the suitability of products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of willful misconduct or gross negligence on the part of the manufacturer. This technical data sheet supersedes all previous editions relevant to this product.



Polyproof Ultra Plus

Fully-bonded, sand coated, pressure sensitive HDPE waterproofing membrane

Pre-applied, single layer loosely laid membrane for substructural waterproofing applications

DESCRIPTION

Polyproof Ultra Plus is a fully-bonded, pre-applied, high-performance HDPE based waterproofing membrane with a reactive inorganic fine granular finish. The membrane is designed to form a chemical and mechanical bond with the freshly poured concrete, effectively becoming an integral part of the structure.

CHARACTERISTICS

- Loosely laid membrane that remains independent of structural movements and settlements
- Cold-applied, easy, and quick to install, no priming required
- Chemical bond of pressure sensitive adhesive with concrete
- · Mechanical adhesion through granular sand finish
- Effectively prevents lateral water migration
- Provides a water and moisture barrier
- · Allows for immediate foot traffic on site
- Temporarily UV resistant during application and steel works (45 days during hot climate)
- Excellent resistance to chemical acids, alkalis, salts, and other corrosive materials
- White solar-reflective surface

FIELDS OF APPLICATION

Underground concrete structures such as:

- Basements
- Below rafts
- Retaining walls
- Infrastructural applications (tunnels and bridges)

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 45°C. While application procedures may vary slightly depending upon site conditions, the general recommended guidelines for the application of Polyproof Ultra Plus are as follows:

Surface preparation

All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable concrete repair mortar from the Polycrete range of



products. Although the surface does not necessarily need to be dry, any standing water should be eliminated prior to the installation of the membrane.

Horizontal Application

The installation of the membrane is done in a loosely laid manner on the blinding concrete to keep the system independent of structural movements. Begin installation from closer to project peripheries by placing the membrane with the adhesive side facing up towards the concrete pour. Begin membrane application by unrolling the sheet and aligning the side and end overlaps.

Vertical Application

The shoring wall shall provide a smooth surface for the application of the membrane. Align the membrane with the adhesive side facing towards the concrete pour and fix mechanically on the vertical height (e.g. with a wooden batten). Align and fix subsequent rolls using the same method and secure all overlaps. During the vertical extensions of the membrane and after the removal of the batten, cut any damaged portion of the membrane and allow sufficient overlapping margins before continuing with the mechanical fixtures on the next level.

TDS_Polyproof-Ultra-Plus_GCC_0424

Overlaps

Side and end overlaps shall be a minimum of 100mm. To ensure the most secure overlap, position each sheet accurately. When overlapping, peel back and remove the liner in the selvedge area to create an adequate bond on the side overlaps. Additional pressure to secure the overlaps can be applied with a roller.

To seal end laps and cut joints, remove a 100mm granular layer by scraping it off, using a hot air gun for easier removal. Place a strip of Polyproof Ultra TSD (double sided tape) with the same width onto the exposed membrane, pressing the top layer of the overlapping membrane firmly before applying additional pressure with a roller to ensure a tight seal over the end overlaps/cut joints.

In horizontal and vertical joinery areas, membranes shall be overlapped with a minimum width of 200 mm using 2 layers of Polyproof Ultra TSD tape (side by side) followed by the application of the Polyproof EPU sealing compound. It is recommended to position the overlapping joint on the horizontal side by extending the vertical membrane downwards.

Corners

Cut Polyproof Ultra Plus to the required size of the corner and remove a 100mm granular layer by scraping it off with the aid of a hot air gun and a scrapper. Place a strip of Polyproof Ultra TSD double-sided tape onto the exposed membrane, press it firmly before adding extra pressure with a roller, and form the corner. Seal with Polyproof EPU sealing compound on the overlaps.

Membrane Termination

All membrane edges at the ground level/below ground level are to be terminated using the aluminum flashing method and are to be sealed with the Polyseal 1PU sealant.

Repair

If damages have occurred on a membrane surface due to site activities, it is recommended to remove the granules at least 100mm around the damage and patch the affected area with Polyproof Ultra Plus TS (single sided tape with sanded finish), followed by sealing the area with Polyproof EPU sealing compound around all edges.

STORAGE & SHELF LIFE

Store Polyproof Ultra Plus in dry and clean conditions and in its original, closed packaging away from sources of chemical contamination, damage, heat and sunlight. In tropical climates, store in air-conditioned rooms. Shelf life is up to 12 months if stored in accordance with the manufacturer's recommendations. Exercise caution when lifting, moving, transporting, storing & handling to avoid puncture and physical damage.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Polyproof Ultra Plus contains an adhesive on the surface which can stick to human skin during application. Such residues can be removed by



Henkel Polybit Industries Ltd. PO Box: 293 Umm Al Quwain, UAE. henkelpolybit@henkel.com Henkel Polybit Industries Ltd. PO Box: 5911 Dammam, KSA. polybitdammam@henkel.com www.henkelpolybit.com using a cloth dipped in a suitable cleaner. Seek medical assistance immediately if any accidents occur on site

SUPPLY

Polyproof Ultra Plus 20m x 1.5m x 1.2mm, 55kg#
Polyproof Ultra Plus TS 20m x 100mm x 1mm, 2.8kg#
Polyproof Ultra TSD 20m x 100mm x 0.6mm, 1.6kg#
Polyproof EPU 2L, 2.48kg#
Polyseal 1 PU 600ml

#Approximate weight

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Membrane thickness,		
[mm]	min. 1.2	ASTM D 3767
Tensile strength*,		
$[N/mm^2]$	>28	ASTM D 412
Elongation at break*,		
[%]	>730	ASTM D 412
Tear strength, [kN/m]	>130	ASTM D 624
Peel adhesion to fresh	nly	
poured concrete,		
[N/mm]	>2.9	ASTM D 903
Lap peel adhesion,		
[N/mm]	>1.3	ASTM D 1876
Puncture resistance,		
[N]	>1100	ASTM E 154
Shear Resistance of Jo	oints, 12	BS EN 12317-2
[N/mm]		
Hydrostatic pressure		
resistance at the joints	·	
[12bar or (120m)]	No leakage	ASTM D 5385
Lateral water migratic	n	
resistance @	_	
[12bar or (120m)]	Pass	ASTM D 5385
Flexibility at low		
temperature, [°C]	No crack at -25	ASTM D 1970
Application		
temperature, [°C]	5 to 45	
Service		
temperature, [°C]	-25 to 70	

^{*} Results confirmed for product tested at longitudinal direction

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organizations and trade associations as well as the respective standards. The characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require manufacturer's written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of products, is based on the manufacturer's professional experience. As materials and conditions may vary with each intended application, sufficient tests are to be conducted to check the suitability of products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of willful misconduct or gross negligence on the part of the manufacturer.

^{*}All values given are subject to 5-20% tolerance.

Polyproof Ultra

Self-adhesive, plain finish HDPE waterproofing membrane

Post-applied, single layer self-adhesive membrane for waterproofing applications on retaining walls

DESCRIPTION

Polyproof Ultra is a self-adhesive, post-applied highperformance HDPE based waterproofing membrane with plain finish and release liner for easy installation.

CHARACTERISTICS

- Self-adhesive
- Provides a water and moisture barrier
- Cold-applied, easy, and quick to install, no priming required
- Temporarily UV resistant during application and steel works (45 days during hot climate)
- Excellent resistance to chemicals, acids, alkalis, salts, and other corrosive materials
- White solar-reflective surface

FIELDS OF APPLICATION

Underground concrete structures such as:

- Retaining walls
- Integral component of the Polyproof Ultra FB system for post application alongside Polyproof Ultra Plus

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of Polyproof Ultra is as follows:

Surface preparation

All surface imperfections, protrusions, structurally unsound and friable concrete must be removed and repaired with a suitable concrete repair mortar from the Polycrete range of products. Although the surface does not necessarily need to be dry, any standing water should be eliminated prior to the installation of the membrane.

Application

The Polyproof Ultra membrane application area is limited to retaining walls with sufficient space available for installation. Take the measurement and cut the membrane to its required length before removing the release liner. Peel off the release film from the self-adhesive side and press it to the surface. Smoothen the membrane from the center to the edges with a sponge surface float to remove entrapped



air. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the membrane with the base surface. Side and end overlaps shall be a minimum of 100mm.

Corners

Begin the corner detailing by using a 200mm corner strip of Polyproof Ultra membrane and apply it to the corners. Fold the corner strip to create a 90° angle and apply it on the external/internal corners. Overlap the subsequent membranes with the corner strip and seal the edges with Polyproof Ultra TS tape.

Membrane Termination

All membrane edges at the ground level/below ground level are to be terminated using the aluminum flashing method and are to be sealed with the Polyseal 1PU sealant.

Repair

In the event of damage occurring on the membrane surface due to site activities, it is advisable to repair the affected area by using a patch of the same membrane followed by sealing of all edges using Polyproof Ultra TS. The patch should extend at least 100mm beyond all sides of the puncture.

TDS_Polyproof-Ultra_GCC_0424

STORAGE & SHELF LIFE

Store Polyproof Ultra in dry and clean conditions and in its original, closed packaging away from sources of chemical contamination, damage, heat and sunlight. In tropical climates, store in air-conditioned rooms. Shelf life is up to 12 months if stored in accordance with the manufacturer's recommendations. Exercise caution when lifting, moving, transporting, storing & handling to avoid puncture and physical damage.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Polyproof Ultra contains an adhesive on the surface which can stick to human skin during application. Such residues can be removed by using a cloth dipped in a suitable cleaner. Seek medical assistance immediately if any accidents occur on site.

SUPPLY

Polyproof Ultra 20m x 1.5m x 1.2mm, 42kg #
Polyproof Ultra TS 30m x 100mm x 0.35mm, 1.4kg #
Polyseal 1 PU 600ml

#Approximate weight

TECHNICAL SPECIFICATION					
PROPERTIES	VALUES	TEST STANDARDS			
Membrane thickness, [mm]	min. 1.2	ASTM D 3767			
Tensile strength*, [N/mm²]	>28	ASTM D 412			
Elongation at break*, [%]	>730	ASTM D 412			
Tear strength, [kN/m]	>130	ASTM D 624			
Peel adhesion to cured concrete, [N/mm]	>1.9	ASTM D 903			
Lap peel adhesion, [N/mm]	>1.1	ASTM D 1876			
Puncture resistance, [N]	>1000	ASTM E 154			
Hydrostatic pressure resistance at the joints [12bar or (120m)]	, No leakage	ASTM D 5385			
Flexibility at low temperature, [°C]	No crack at -25	ASTM D 1970			
Application temperature, [°C]	5 to 45				
Service temperature, [°C]	-25 to 70				

^{*} Results confirmed for product tested at longitudinal direction

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organizations and trade associations as well as the respective standards. The characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require manufacturer's written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of products, is based on the manufacturer's professional experience. As materials and conditions may vary with each intended application, sufficient tests are to be conducted to check the suitability of products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of willful misconduct or gross negligence on the part of the manufacturer. This technical data sheet supersedes all previous editions relevant to this product.



^{*}All values given are subject to 5-20% tolerance.



Polyfoam CPS 40 BA

Two Component, Polyurethane Foam System

Polyfoam CPS-40 BA is a HCFC blown & CFC free, polymeric MDI based system to produce continuous sandwich panels.

CHARACTERISTICS

- Continuous Process
- ► CFC Free
- ▶ 40-45 Density.





DESCRIPTION

Polyfoam CPS-40 BA is formulated for continuous line production of metal faced sandwich panels. It is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam of thickness 50 mm panel with a density 40-45 kg/m³.

FIELDS OF APPLICATION

- Continuous sandwich panels

COMPONENTS PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- Viscosity @ 20°C. : 150 200 cps
- Specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31 (Expiry 6 months from production date)

Polyol Component is a blend of polyols, catalysts, surfactants and HCFC-141B

- Viscosity @ 20°C is approx.500 cps.
- Specific gravity @ 20°C: 1.16 (Expiry 6 months from production date)

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapor. Close all drums after use. Maximum permissible storage time is 6 months.

The ideal storage temperature is between $+20^{\circ}\text{C}$ and $+25^{\circ}\text{C}$. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Polyol



might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product.

Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

Typical reaction rate and density (laboratory, cup mix)

PolyFoam CPS – 40 BA	PBW	100
PolyFoam MDI	PBW	130

Two components are mixed at 20°C @3000 RPM.

– Cream Time: 09 - 13 sec.

- Gel Time: 55 - 60 sec.

- Tack Free Time 65 - 80 sec

- Free Rise Density: 28 - 29 kg/m³

Reactivity and density may vary depending upon ambient temperature.

S	U	P	P	Г	Y

Polyfoam CPS-40 BA	220Kg drum
Polyfoam MDI	250Kg drum

TDS_Polyfoam CPS 40 BA_GCC_1121

1

TYPICAL MECHANICAL PROPERTIES WHEN WELL PROCESSED					
PARAMETERS	UNIT	VALUE	STANDARDS		
Ratio		1:1.3			
Density	Kg/m³	40-45	ASTM D 1622		
Compressive Strength	KPa	≥100	ASTM D 1621		
Thermal Conductivity @ 25°C	W/m °K	< 0.024	ASTM C 518		
Dimensional Stability at -20°C +25°C +70°C	%	Max 2.5	ASTM D 2126		
Fire Behavior	mm	В3	DIN 4102		

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Polyfoam CPS-40P

4 component PIR system

CPS-40P is Mid Index PIR polyol developed for continuous line manufacturing of metal-faced sandwich panels.

CHARACTERISTICS

- ► Continuous Process
- ► PIR
- ► N-Pentane Blowing Agent.

DESCRIPTION

Polyfoam CPS-40P is four component PIR system developed for continuous line manufacturing of metal-faced sandwich panels. The foam produced has increased resistance to burning and spread of flame. The system is designed to be used with N-pentane as blowing agent.

Panels of 50 to 100 mm can be produced with densities between 40 and 45 kg/m³. However, necessary process adjustments for thickness variation needs to be done at the customer end. Polyfoam CPS-40P can achieve a B2 flammability rating to DIN 4102.

FIELDS OF APPLICATION

- PIR Sandwich Panels

COMPONENTS PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- Viscosity @ 20°C.: 150 200 cps
- Specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31 (Expiry 6 months from production date)

Polyol Component is a blend of polyols, catalysts, and surfactant.

- Viscosity @ 20°C is approx.800 12000 cps.
- Specific gravity @ 20°C: 1.18 (Expiry 6 months from production date)

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months.

The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent absorption of moisture.



Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product.

Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

Typical reaction rate and density (laboratory, cup mix)

PolyFoam CPS-40P	PBW	50	
Catalyst	PBW	1.0	
N-Pentane	PBW	4.5	
PolyFoam MDI	PBW	90	

Three components are mixed at 20°C @3000 RPM.

- Cream Time: 12 15 sec.
- Gel Time: 45 55 sec.
- Free Rise Density: 33 36 kg/m3

Reactivity and density may vary depending upon ambient temperature

FORMULATION WHEN PROCESSING IN MACHINE

PolyFoam CPS-40P	PBW	100
PolyFoam CAT 6908	PBW	2
N-Pentane	PBW	9
PolyFoam MDI	PBW	180

*However, slight formulation adjustment might be required during processing to achieve customer requirement.

NOTE

The following must be considered when handling Isomers of pentane:

It is extremely flammable and can form explosive mixtures with air. Since it is heavier than air, it can accumulate on the floor or nearby place or shafts. Therefore, avoid and keep the ignition sources far away as possible. Always to keep the safety data sheet of the pentane supplier, the instructions of the device manufacturer (about earthing and explosion protection) and the requirements in the plant permit issued by the local authorities.

TYPICAL MECHANICAL PROPERTIES WHEN WELL PROCESSED			
PARAMETERS	UNIT	VALUE	
Density	Kg/m³	40-45	
Compressive Strength	KPa	≥100	
Thermal Conductivity	W/m °K	<0.024	
Dimensional Stability at -20°C +25°C +70°C	%	Max 2.5	
Closed Cell	%	≥90	
Fire Behavior	mm	B2 < 150	

SUPPLY	
Polyfoam CPS-40P	220Kg drum
Polyfoam MDI	250Kg drum
PolyFoam CAT 6908	180Kg drum





gm = 2

Two component, polyurethane injection/pouring foam system

Polyfoam I-20 is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid polyurethane foam.

CHARACTERISTICS

- ► Injection grade
- CFC free
- 35kg density





DESCRIPTION

Polyfoam I-20 is a two-component, Injection/Pouring grade polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. Polyfoam I-20 is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 35 kg/m³ by injection/Pouring process. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- Sandwich panels
- Insulation boards
- Refrigeration & in site cavity filling
- Water coolers, heaters and appliances

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C. : 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial



TDS Polyfoam I-20 GCC 0324

crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

1 polyol:1.20 MDI by weight. Typical reaction rate and density (laboratory, cup mix) (both components at 20°C & 100gm/mix)

- cream time: 20 23 sec.
- gel time: 115 125 sec.
- free rise density: 22 24kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPLY

Polyfoam I-20	220kg drum
Polyfoam MDI	250kg drum

1

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [PBW]	1:1.20	-
Final density, [kg/m³]	35 - 38	ASTM D 1622
Compressive strength, [kpa]	>100	ASTM D 1621
Thermal conductivity @ 25°C, W/ [mk]		
Initial value	0.023	
Aged value	0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	>90	ASTM D 2856
Dimensional stability, % linear change		
7 days @ - 15 °C	< 1.0	
7 days @ 100 °C	<2	
7 days @ 70 °C [100% RH]	<2.5	ASTM D 2126
Fire resistance	Class B3	DIN 4102

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





am I-25

Two component, polyurethane injection/pouring foam system

Polyfoam I-25 is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid Polyurethane foam.

CHARACTERISTICS

- ► Injection/pouring grade
- CFC free
- 40kg density





DESCRIPTION

Polyfoam I-25 is a two-component, Injection/Pouring grade polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. Polyfoam I-25 is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 40 kg/m³ by injection/Pouring process. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

Sandwich panels/cold room panels

- insulation boards
- refrigeration & in-site cavity filling
- water coolers, heaters and appliances

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C. : 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial



TDS_Polyfoam I-25_GCC_0519

crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

1 polyol:1.20 MDI by weight.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C & 100gm/mix)

- cream time: 22 24 sec.
- gel free time: 130 180 sec.
- free rise density: 27-30kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

Polyfoam I-25	220kg drum
Polyfoam MDI	250kg drum

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [PBW]	1:1.20	-
Final density, [kg/m³]	40 to 45	ASTM D 1622
Application thickness, [inches]		
Min	1/2	
Max	4	
Compressive strength, [kpa]		
With rise	160 to 200	
Against rise	100 to 130	ASTM D 1621
Thermal conductivity @ 25°C, W/ [mk]		
Initial value	0.023	
Aged value	0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	92 to 93	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	2	
With skin retained	1	ASTM C 518/91
Water absorption, per cm² [gm/cc]		
Without protective coating	0.0087	
With protective coating	0.0019	ASTM C 272
Dimensional stability, % linear change		
7 days @ - 15 °C	< 1.0	
7 days @ 100 °C	<2	
7 days @ 70 °C [100% RH]	<2.5	ASTM D 2126
Fire resistance	Class B3	DIN 4102

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Two component, polyurethane injection foam system

Polyfoam I-80 is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid polyurethane foam

CHARACTERISTICS

- ► Injection/pouring grade
- CFC free
- 80kg density





DESCRIPTION

Polyfoam I-80 is a two-component, Injection grade polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. Polyfoam I-80 is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 80 kg/m³ by injection/Pouring process. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- Pre insulated pipes
- In site cabinet filling

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C. : 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can,



TDS_Polyfoam I-80_GCC_0519

however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

1 polyol:1.2 to MDI or 1:1.4 by weight. Typical reaction rate and density (laboratory, cup mix) (both components at 20°C & 100gm/mix)

- cream time: 50 60 sec.
- gel free time: 220 240 sec.
- free rise density: 55 65kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

Polyfoam I-80	220kg drum
Polyfoam MDI	250kg drum

PROPERTIES	VALUES	STANDARDS
		STAINDANDS
Mix ratio, [PBW]	1:1.2 – 1: 1.4	-
Final density, [kg/m³]	80 to 90	ASTM D 1622
Application thickness, [cm]		
Min	2	
Max	5	-
Compressive strength, [kpa]		
With rise	320 to 400	
Against rise	280 to 360	ASTM D 1621
Thermal conductivity @ 25°C, W/ [mk]		
Initial value	0.023	
Aged value	0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	93 to 95	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	2	
With skin retained	1	ASTM C 518/91
Water absorption, per cm² [gm/cc]		
Without protection	0.0087	
With protection	0.0019	ASTM C 272
Dimensional stability, % linear change		
7 days @ - 15 °C	< 1.0	
7 days @ 100 °C	< 2	
7 days @ 70 °C(100% RH)	< 2.5	ASTM D 2126
Fire resistance	Class B3	DIN 4102



Polyfoam I-40FR

Two component, polyurethane injection foam system

Polyfoam I-40FR is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid polyurethane foam with fire rated property B2 class.

CHARACTERISTICS

- ► Injection grade
- ► CFC free
- ▶ 40-45 density





DESCRIPTION

Polyfoam I-40FR is a two-component, injection grade polyurethane foam. It is HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal final density range between 40 - 45 kg/ m³ by injection. It is fire rated with B2 class as per DIN 4102 standard. It also meets the standard EN 11925.

FIELDS OF APPLICATION

- Sandwich panels
- Cold store panels
- Air handling units

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C. : 150 200 cps
- specific gravity @ 20°C: 1.24
- NCO content, % wt.: 30-31 (Expiry 6 months from production date).

Polyol Component is a blend of polyols, catalysts, surfactants and HCFC -141B.

- viscosity @ 20°C: between 350-800 mPa.S
- density @ 20°C: between 1.15-1.19 g/cm³ (Expiry 6 months from production date).

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can,

however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product.

Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

Typical reaction rate and density (laboratory, cup mix).

Polyfoam I-40FR	PBW	100
Polyfoam MDI	PBW	120

Two components are mixed @3000 RPM.

- cream time: 20 35 sec.
- gel time: 140 170 sec.
- free rise density: 31 35kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

TDS_Polyfoam I-40FR_GCC_0924

1

SUPPLY			
Polyfoam I-40FR	220kg drum		
Polyfoam MDI	250kg drum		
TECHNICAL DET	ALLC		

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [PBW]	1:1.20	-
Final density, [kg/m³]	40 - 45	ASTM D 1622
Compressive strength, [Kpa]	≥100	ASTM D 1621
Thermal conductivity @ 25°C, W/ [mk]	< 0.026	ASTM C 518
Dimensional stability, % linear change		
@ - 20 °C	Max 2.5	ASTM D 2126
@ 25 °C	Max 2.5	ASTM D 2126
@ 70 °C	Max 2.5	ASTM D 2126
Fire behavior	Class B2	DIN 4102

The best results are obtained at 38 - 45 °C mold temperature.





oam PIR-35

Two component, polyisocyanurate block system

Polyfoam PIR-35BA is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid PIR foam.

CHARACTERISTICS

- ► Injection/pouring grade
- CFC free
- 35kg density PIR





DESCRIPTION

Polyfoam PIR-35BA is a two-component, Injection/pouring grade polyisocyanurate foam system developed for rigid PIR blocks, which has greatly increased resistance to burning and spread of flame. The composition of Polyfoam PIR-35BA, when subjected to fire, the outer surface forms a strong carbonaceous layer which retards further flame spread and is able to withstand temperature up to 140°C. Polyfoam PIR-35BA is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 35kg/m³ by injection/ Pouring process. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- PIR blocks
- insulation of pipes, joints, tank and vessel

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C.: 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial



TDS_Polyfoam PIR-35 BA_GCC_0519

crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

1 polyol:1.3 MDI by weight.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C & 100gm/mix)

- cream time: 75 85 sec
- gel free time: 150 160 sec.
- free rise density: 34 36kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

Polyfoam PIR 35 BA	220kg drum
Polyfoam MDI	250kg drum

VALUES	STANDARDS
1:1.3 to 1:1.5	-
33 to 38	ASTM D 1622
30 to 35	ASTM D 1622
300	
500	-
200 to 220	
150 to 180	ASTM D 1621
0.023	
0.026	ASTM C 518/19
92 to 95	ASTM D 2856
1.5	
1	ASTM C-518/91
0.0087	
0.0019	ASTM C 272
< 1.0	
< 1.5	
< 2.0	ASTM D 2126
Class B2	DIN 4102
	1:1.3 to 1:1.5 33 to 38 30 to 35 300 500 200 to 220 150 to 180 0.023 0.026 92 to 95 1.5 1 0.0087 0.0019 < 1.0 < 1.5 < 2.0





oam PIR-5

Two component, polyisocyanurate block system

Polyfoam PIR-50BA is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid PIR foam.

CHARACTERISTICS

- ► Injection/pouring grade
- CFC free
- 50kg density PIR





DESCRIPTION

Polyfoam PIR-50 BA is a two-component, Injection/pouring grade polyisocyanurate foam system developed for rigid PIR blocks, which has greatly increased resistance to burning and spread of flame. The composition of Polyfoam PIR-50BA, when subjected to fire, the outer surface forms a strong carbonaceous layer which retards further flame spread and is able to withstand temperature up to 140°C. Polyfoam PIR-50BA is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 45 - 50 kg/m³ by injection/pouring process. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- PIR block manufacturing
- insulation of pipes, joints, tank and vessel

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C. : 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature



TDS Polyfoam PIR-50 BA GCC 0519

is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

1 polyol: 1.3 MDI by weight.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C & 100gm/mix)

- cream time: 85 90 sec
- gel time: 200 210 sec.
- free rise density: 43 52kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

Polyfoam PIR 50BA	220kg drum
Polyfoam MDI	250kg drum

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [PBW]	1:1.3	-
Final density, [kg/m³]	43 to 52	ASTM D 1622
Core density, [kg/m³]	45 to 50	ASTM D 1622
Application thickness, [cm]		
Min	300	
Max	500	-
Compressive strength, kpa		
With rise	280 to 320	
Against rise	240 to 280	ASTM D 1621
Thermal conductivity @ 25°C, W/ [mk]		
Initial Value	0.023	
Aged Value	0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	92 to 95	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	1.5	
With skin retained	1	ASTM C 518/91
Water absorption, per cm ² (gm/cc)		
Without protection	0.0087	
With protection	0.0019	ASTM C 272
Dimensional stability, % linear change		
7 days @ - 15 °C	< 1.0	
7 days @ 100 °C	< 1.5	
7 days @ 70 °C [100% RH]	< 2.0	ASTM D 2126
Fire resistance	Class B2	DIN 4102
Service temperature	-40°C to 150°C	-

2





Polyfoam PIR-40BA

Two component, polyisocyanurate block system

Polyfoam PIR-40BA is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid PIR foam.

CHARACTERISTICS

- ► Injection/pouring grade
- ► CFC Free
- ▶ 40 Kg density PIR





DESCRIPTION

Polyfoam PIR-40BA is a two-component, Injection/pouring grade polyisocyanurate foam system developed for rigid PIR blocks, which has greatly increased resistance to burning and spread of flame. The composition of Polyfoam PIR-40BA, when subjected to fire, the outer surface forms a strong carbonaceous layer which retards further flame spread and can withstand temperature up to 140°C. Polyfoam PIR-40BA is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid PIR foam with a nominal core density of 40kg/m3 by injection/Pouring process. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- PIR block manufacturing
- Pre insulated pipes

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- Viscosity @ 20°C.: 150 200 cps
- Specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31 (Expiry 6 months from production date)

Polyol Component is a blend of polyols, catalysts, surfactant and blowing agent.

- Viscosity @ 20°C is approx. 500 cps.
- Specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months.



TDS_Polyfoam PIR-40 BA_GCC_0222

1

The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product.

Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

1 polyol:1.4 MDI by weight.

Typical reaction rate and density (laboratory, cup mix for both components at 20°C)

- Cream Time: 75 100 sec
- Gel Time: 170 200 sec.
- Free Rise Density: 37.5 39.0 kg/m³
- *Reactivity and density may vary depend on ambient temperature and grade

SUPPLY

Polyfoam PIR-40BA	220Kg drum
Polyfoam MDI	250Kg drum

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix Ratio, [PBW]	1:1.4	NA
Final Density, [Kg/m3]	Approx.: 40	ASTM D 1622
Core Density, [Kg/m3]	Approx.: 37	ASTM D 1622
Application Thickness, [cm]		
Min:	300	
Max:	500	
Compressive Strength, [Kpa]	> 100	ASTM D 1621
Thermal Conductivity @ 25°C, [W/mk]	0.023	ASTM C 518/19
Dimensional Stability [%]		
3 days @ - 20°C	< 2	ASTM D 2126
3 days @ + 25°C		
B days @ +70°C [RH > 95%]		
Fire Resistance	B2 Class	DIN 4102





Polyfoam SS 35

Two component, Spray Polyurethane Foam (SPF) system

Polyfoam SS 35 is an HFC-blown & CFC free, polymeric M.D.I based system to produce rigid polyurethane foam.



CHARACTERISTICS

- ► Spray grade
- ► CFC free
- ► 35kg density





DESCRIPTION

Polyfoam SS 35 is a two-component, spray-applied polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. Polyfoam SS 35 is an HFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 35 kg/m³ by spray process. The system may be applied to substrates where the surface temperature is of the order of 25 - 30°C. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- roof spraying applications.
- flooring and wall insulation.
- storage tank insulation.

ENVIRONMENTAL INFORMATION

Contributes toward maximizing the points in the EA Credit-Optimize Energy Performance under LEED® v4 requirements.

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C.: 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature



TDS Polyfoam SS 35 GCC 0322

1

is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact. Store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

MIX RATIO

1:1 by volume.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C)

- cream time: 6 8 sec.
- tack free time: 15 25 sec.
- free rise density: 20 23kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

COVERAGE

Average consumption of 1.3kg/m² with 3cm thickness

SUPPLY

Polyfoam SS 35	220kg drum
Polyfoam MDI	250kg drum

2

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [volume:volume]	1:1	-
Final density, kg/m³	33 to 38	ASTM D 1622
Application thickness, [inches]		
Min	1/2	
Max	2	
Compressive strength, [kpa]		
With rise	260 to 330	
Against rise	172 to 207	ASTM D 1621
Thermal conductivity @ 25°C, W/ [mk]		
Initial value	0.023	
Aged value	0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	92 to 93	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	2	
With skin retained	1	ASTM C 518/91
Water absorption, per cm² [gm/cc]		
Without protective coating	0.0087	
With protective coating	0.0019	ASTM C 272
Dimensional stability, % linear change		
7 days @ - 15 °C	< 1.0	
7 days @ 100 °C	2	
7 days @ 70 °C [100% RH]	2.5	ASTM D 2126
Fire resistance	Class B3	DIN 4102

All values given are subject to 5-10% tolerance





POLYFOAM SS-40A

Two-component, spray-applied polyurethane foam system

POLYFOAM SS-40A is an HFC-blown & CFC free, polymeric M.D.I based system to produce rigid polyurethane foam.

CHARACTERISTICS

- ► Spray applied
- ► CFC free
- ▶ 40kg density





DESCRIPTION

POLYFOAM SS-40A is a two-component, spray-applied polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. POLYFOAM SS-40A is an HFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 40 kg/m³ by spray process. The system may be applied to substrates where the surface temperature is of the order of 25°C - 30°C. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- Roof spraying applications.
- Flooring and wall insulation.
- Storage tank insulationprimer

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C. : 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- vscosity @ 20°C Approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid



TDS_PolyFoam SS40A_GCC_1122

1

state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Safety goggles, impermeable protective gloves and coveralls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact. Store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

MIX RATIO

1:1 by volume.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C)

- cream time: 4 6 sec.
- tack free time: 8 10 sec.
- free rise density: 27 29kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

POLYFOAM SS-40A

Part A	220kg drum
Part B (MDI)	250kg drum

COVERAGE

Average consumption of $1.5 kg/m^2$ with 3 cm thickness

TECHNICAL CRECIFICATION		
TECHNICAL SPECIFICATION)/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	071117177
PROPERTIES	VALUES	STANDARDS
Mix ratio, [volume:volume]	1:1	-
Final density, [kg/m]	38 to 42	ASTM D 1622
Application thickness, [cm]		
Min	3	
Max	10	-
Compressive strength, [kpa]		
With rise	220 to 320	
Against rise	172 to 207	ASTM D 1621
Thermal conductivity @ 25°C, W/(mk)		
Initial value	0.023	
Aged value	0.026	ASTM C 518/19
Closed cell content,		
apparent vol, %	92 to 93	ASTM D 2856
Water vapor transmission,		
perm-inch		
All cut surfaces	2	ASTM C 518/91
With skin retained	1	
Water absorption, per cm ² [gm/cc]		
Without protective coating	0.0087	ASTM C 272
With protective coating	0.0019	
Dimensional stability, % linear change		
7 days @ - 15°C	<1.0	ASTM D 2126
7 days @ 100°C	2	
7 days @ 70°C [100% RH]	2.5	
Fire resistance	Class B3	DIN 4102
U Value for 50mm thick foam— w/mk	0.46	-
U Value for 40mm thick foam- w/mk	0.57	-





Polyfoam SS 50

Two component, Spray Polyurethane Foam (SPF) system

Polyfoam SS 50 is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid polyurethane foam.



CHARACTERISTICS

- ► Spray grade
- ► CFC free
- ► 50kg density





DESCRIPTION

Polyfoam SS 50 is a two-component, spray-applied polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. Polyfoam SS 50 is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 50 kg/m³ by spray process. The system may be applied to substrates where the surface temperature is of the order of 25 - 30°C. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- roof spraying applications.
- flooring and wall insulation.
- storage tank insulation.

ENVIRONMENTAL INFORMATION

Contributes toward maximizing the points in the EA Credit-Optimize Energy Performance under LEED® v4 requirements

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C. : 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture



TDS Polyfoam SS 50 GCC 0425

vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact. Store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

MIX RATIO

1:1 by volume.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C)

- cream time: 4 6 sec.
- tack free time: 8 14 sec.
- free rise density: 37 39kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

Polyfoam SS 50	220kg drum
Polyfoam MDI	250kg drum

TDS_Polyfoar

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [volume:volume]	1:1	-
Final density, [kg/m³]	48 to 53	ASTM D 1622
Average consumption for 3 cm thickness [Kg/m²]	1.88	-
Compressive strength, [kpa]	260 to 360	ASTM D 1621
Thermal conductivity @ 25°C, W/ [mk]		
Initial value	0.023	
Aged value	0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	92 to 95	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	2	
With skin retained	1	ASTM C 518/91
Water absorption, per cm² [gm/cc]		
Without protective coating	0.0087	
With protective coating	0.0019	ASTM C 272
Dimensional stability, % linear change		
7 days @ - 15 °C	< 1.0	
7 days @ 100 °C	2	
7 days @ 70 °C [100% RH]	2.5	ASTM D 2126
Fire resistance	Class B3	DIN 4102





Polyfoam SS 60

Two component, Spray Polyurethane Foam (SPF) system

Polyfoam SS 60 is an HCFC-blown & CFC free, polymeric M.D.I based system to produce rigid polyurethane foam.



CHARACTERISTICS

- ► Spray grade
- ► CFC free
- ► 60kg density





DESCRIPTION

Polyfoam SS 60 is a two-component, spray-applied polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. Polyfoam SS 60 is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal core density of 60 kg/m³ by spray process. The system may be applied to substrates where the surface temperature is of the order of 25 - 30°C. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- roof spraying applications.
- flooring and wall insulation.
- storage tank insulation.

ENVIRONMENTAL INFORMATION

Contributes toward maximizing the points in the EA Credit-Optimize Energy Performance under LEED® v4 requirements

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C.: 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx.450 cps.
- specific gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible



TDS Polyfoam SS 60 GCC 0425

storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact. Store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

MIX RATIO

1:1 by volume.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C)

- cream time: 4 6 sec.
- tack free time: 8 14 sec.
- free rise density: 47 48kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

Polyfoam SS 60	220kg drum
Polyfoam MDI	250kg drum

TDS_Polyfog

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [volume:volume]	1:1	-
Final density, [kg/m³]	55 to 65	ASTM D 1622
Average consumption for 3 cm thickness [Kg/m²]	2.25	
Compressive strength [kg/cm²], kpa	350 to 420	ASTM D 1621/94
Tensile strength [kg/cm²],	3.8 to 4.0	ASTM D 1623/78
Thermal conductivity @ 25°C, W/ [mk] Initial value	0.023	
Aged value	0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	95 to 98	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	2	
With skin retained]	ASTM C 518/91
Water absorption, per cm² [gm/cc]		
Without protective coating	0.0087	
With protective coating	0.0019	ASTM C 272
Dimensional stability, % linear change		
7 days @ - 15 °C	< 1.0	
7 days @ 100 °C	2	
7 days @ 70 °C [100% RH]	2.5	ASTM D 2126
Fire resistance	Class B3	DIN 4102



Polyfoam Glue

Two component, polyurethane glue system

Polyfoam glue is a polymeric MDI based system for adhesion of rock wool and PU board.

CHARACTERISTICS

- ► Pouring grade
- ► CFC free
- ► Firm Adhesive





DESCRIPTION

Polyfoam Glue is a two-component, polyurethane adhesive that creates a seamless, monolithic barrier against water vapor and air. Polyfoam glue is HCFC- & CFC free, polymeric M.D.I based system for adhesive purpose. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- adhesion of rock wool sandwich panel.
- PU board adhesion

COMPONENT PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- viscosity @ 20°C.: 150 200 cps
- specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol component is a low v viscosity blend of polyols, hydro fluorocarbon blowing agent, catalysts and surfactant

- viscosity @ 20°C approx. 800 cps.
- specific gravity @ 20°C : 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +35°C. MDI may undergo partial crystallization at temperature below 0°C. The product can,



TDS_Polyfoam Glue_GCC_0519

1

however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact. Store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent loss of blowing agent and absorption of moisture.

MIX RATIO

100gm polyol: 68gm MDI

Typical reaction rate and density (laboratory, cup mix)

(both components at 20°C)

– tack free time: 10 - 15 minutes

Reactivity may vary depend on ambient temperature and grade.

SUPPLY		
Pu foam glue	220kg drum	
Polyfoam MDI	250kg drum	

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio (Polyol : MDI)	100 : 68	-
Chemical resistance	After 7 days	-
Temperature resistance after curing	20°C to 80°C	-
Shelf life	6 months from productio	n date





Polyfoam - MDI

Diphenylmethane Diisocyanate

CHARACTERISTICS

▶ Diphenylmethane – 4,4'- diisocyanate



DESCRIPTION

Polyfoam - MDI is a liquid, dark brown mixture of diphenylmethane – 4,4'- diisocyanate with isomers and homologues of higher functionality. It is used in conjunction with polyol to produce rigid polyurethane foams.

FIELDS OF APPLICATION

 it is used in conjunction with polyol to produce rigid polyurethane foams.

STORAGE & HANDLING

Recommended storage temperature: +10 to +30°C. Storage stability (ex works): 6 months if stored in moisture – tight drums.

APPLICATION INSTRUCTIONS

MDI may undergo partial crystallization at temperatures below 0°C. The product can, however, be brought back into the liquid state by heating the entire contents of the drum for a short time to a maximum of 70°C, although this may lead to an increase in the solids content. Drums including empty ones – should always be kept tightly sealed. The product should never be allowed to come into contact with water, which reacts with MDI to form polyureas and carbon dioxide. Contact with water in any form (damp drums, solvents containing water, moist air) must be prevented not only during storage, but also when removing material from drums and during processing. Failure to do so may lead to a dangerous build – up of pressure in tanks and drums due to the generation of carbon dioxide. In addition, polyureas forming in MDI can cause solids to separate out, leading to blockages in the filters, pumps and pipelines of the processing equipment and resulting in production problems. MDI is a mixture of diphenylmethane-4,4'-diisocyanate isomers with a specific content of homologues of higher functionality. At 20°C MDI has a vapour pressure of less than 10⁻⁵ mbar. Due to the



TDS_Polyfoam MDI_GCC_0519

1

production method used, isocyanates based on MDI always contain phenyl isocyanate (max. 50 ppm), but this has practically no effect on the toxicological properties of MDI.

MDI is classified as a dangerous substance and requires a hazard-warning label. It must be handled with care. An occupational exposure limit has been set which defines the maximum permissible workplace concentration, in the form of gas, vapour or airborne particulate, of a specific chemical or chemicals contained in MDI. Details of the current occupational exposure limit, which is subject to constant review, are given in the Safety Data Sheet accompanying the product.

The degree of risk depends mainly on the quantities of isocyanate vapours and aerosols released when MDI is processed. No problems arise when MDI is poured at 20 to 25°C, provided this is done in a well-ventilated area. It is however essential to provide adequate exhaust ventilation at each workplace, with the air being drawn away from the personnel handling the product. Exhaust equipment should be periodically checked.

Ventilation is particularly important if MDI or reaction mixtures containing MDI are sprayed, heated or processed at temperatures above 25° C, since there is then a risk that the occupational exposure limit may be exceeded.

Vapours and aerosols of MDI (the latter being formed during spray application or when cleaning mixing heads with an air blast) cause irritation to the eyes and the mucous membranes of the nose, throat and lungs, and may lead to hypersensitivity reactions. Inhalation should therefore be avoided.

Safely goggles, impermeable protective gloves and overalls fastened at neck and wrist should always be worn when handling MDI. Splashes of MDI in the eyes should be removed immediately by careful flushing with copious amounts of water. Medical attention should then be obtained. Splashes on the skin should be wiped off immediately, after which the contaminated areas should be thoroughly washed with soap and water. A barrier cream should than be applied. Contaminated clothing should be removed immediately to prevent further skin contact. MDI should be kept away from food, drink and tobacco.

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	
Appearance	Dark brown liquid	
Specific gravity at 25[°C]	1.22-1.25	
Viscosity at 25[°C]	150-250 mPa.S	
NCO% Wt	30.2-32.0	
Acid content(HCL)	<u><</u> 0.05%	
Hydrolysable chlorine	<u><</u> 0.2%	

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Diphenylmethane Diisocyanate

CHARACTERISTICS

▶ Diphenylmethane – 4,4'- diisocyanate



DESCRIPTION

Polyfoam MDI-GA is a liquid, dark brown mixture of diphenylmethane – 4,4'- diisocyanate with isomers and homologues of higher functionality. It is used in conjunction with polyol to produce rigid polyurethane foams.

FIELDS OF APPLICATION

- it is used in conjunction with polyol to produce rigid polyurethane foams.

STORAGE & HANDLING

Recommended storage temperature: $+ 10 \text{ to } + 30^{\circ}\text{C}$. Storage stability (ex works): 6 months if stored in moisture tight drums.

APPLICATION INSTRUCTIONS

MDI-GA may undergo partial crystallization at temperatures below 0°C. The product can, however, be brought back into the liquid state by heating the entire contents of the drum for a short time to a maximum of 70°C, although this may lead to an increase in the solids content. Drums including empty ones – should always be kept tightly sealed. The product should never be allowed to come into contact with water, which reacts with MDI-GA to form polyureas and carbon dioxide. Contact with water in any form (damp drums, solvents containing water, moist air) must be prevented not only during storage, but also when removing material from drums and during processing. Failure to do so may lead to a dangerous build – up of pressure in tanks and drums due to the generation of carbon dioxide. In addition, polyureas forming in MDI-GA can cause solids to separate out, leading to blockages in the filters, pumps and pipelines of the processing equipment and resulting in production problems. MDI-GA is a mixture of diphenylmethane-4,4'-diisocyanate isomers with a specific content of homologues of higher functionality. At 20°C MDI-GA has a vapour pressure of



TDS Polyfoam MDI-GA GCC 1022

less than 10⁻⁵ mbar. Due to the production method used, isocyanates based on MDI-GA always contain phenyl isocyanate (max. 50 ppm), but this has practically no effect on the toxicological properties of MDI-GA.

MDI-GA is classified as a dangerous substance and requires a hazard-warning label. It must be handled with care. An occupational exposure limit has been set which defines the maximum permissible workplace concentration, in the form of gas, vapour or airborne particulate, of a specific chemical or chemicals contained in MDI-GA. Details of the current occupational exposure limit, which is subject to constant review, are given in the Safety Data Sheet accompanying the product.

The degree of risk depends mainly on the quantities of isocyanate vapours and aerosols released when MDI-GA is processed. No problems arise when MDI-GA is poured at 20 to 25°C, provided this is done in a well-ventilated area. It is however essential to provide adequate exhaust ventilation at each workplace, with the air being drawn away from the personnel handling the product. Exhaust equipment should be periodically checked.

Ventilation is particularly important if MDI-GA or reaction mixtures containing MDI-GA are sprayed, heated or processed at temperatures above 25°C, since there is then a risk that the occupational exposure limit may be exceeded.

Vapours and aerosols of MDI-GA (the latter being formed during spray application or when cleaning mixing heads with an air blast) cause irritation to the eyes and the mucous membranes of the nose, throat and lungs, and may lead to hypersensitivity reactions. Inhalation should therefore be avoided.

Safely goggles, impermeable protective gloves and overalls fastened at neck and wrist should always be worn when handling MDI-GA. Splashes of MDI-GA in the eyes should be removed immediately by careful flushing with copious amounts of water. Medical attention should then be obtained. Splashes on the skin should be wiped off immediately, after which the contaminated areas should be thoroughly washed with soap and water. A barrier cream should than be applied. Contaminated clothing should be removed immediately to prevent further skin contact. MDI-GA should be kept away from food, drink and tobacco.

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	
Appearance	Dark brown liquid	
Specific gravity at 25[°C]	1.22-1.25	
Viscosity at 25[°C]	150-250 mPa.S	
NCO% Wt	30.0 – 32.0	
Acid content(HCL)	<u><</u> 0.05%	
Hydrolysable chlorine	<u><</u> 0.2%	

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Three component, polyisocyanurate block system

Polyfoam PIR 200 is CFC and HCFC free, polymeric MDI based system to produce rigid PIR foam. However, quantity of HCFC is added by the customer during process to get the required densities.

CHARACTERISTICS

- ► Injection/pouring grade
- Blowing Agent Free (CFC & HCFC Free)
- High density PIR





DESCRIPTION

Polyfoam PIR-200 is a three-component, Injection/pouring grade polyisocyanurate foam system developed for rigid PIR blocks which has increased resistance to burning and spread of flame. The composition of Polyfoam PIR-200, when subjected to fire, the outer surface forms a strong carbonaceous layer which retards further flame spread and can withstand temperature up to 150°C. Polyfoam PIR-200 with HCFC and polymeric MDI produces rigid urethane foam with a nominal core density of 80 - 120 Kg/m3 by Injection/Pouring process. However, to achieve the density mentioned customer will adjust the quantity of HCFC blowing agent during process.

FIELDS OF APPLICATION

- PIR block manufacturing
- Pre insulated pipes

COMPONENTS PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- Viscosity @ 20°C.: 150 200 cps
- Specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31 (Expiry 6 months from production date)

Polyol Component is a blend of polyols, catalysts, and surfactant

- Viscosity @ 20°C is approx. 3200 cps.
- Specific gravity @ 20°C: 1.23 (Expiry 6 months from production date)

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible



TDS_Polyfoam PIR-200_GCC_0521

storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and Carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent absorption of moisture. Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

Typical reaction rate and density (laboratory, cup mix) Polyol: 30 grams; HCFC: 5 grams; MDI: 42 grams (The ratio is approximately 1:1.2). Three components are mixed at 20°C @3000 RPM.

- Cream Time: 90 105 sec.
- Gel Time: 225 240 sec.
- Free Rise Density: 42 46 kg/m³

Reactivity and density may vary depending upon ambient temperature.

SUPPLY

Polyfoam PIR 200	220Kg drum
Polyfoam MDI	250Kg drum

TECHNICAL DETAILS		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [PBW]	1:1.3	-
Final density, [kg/m³]	80 to 120	ASTM D 1622
Core density, [kg/m³]	75 to 115	ASTM D 1622
Application thickness, [cm]		
Min	300	
Max	400	-
Compressive strength, kpa		
With rise	420 to 450	
Against rise	380 to 420	ASTM D 1621
Thermal conductivity @ 25°C, W/ [mk]		
Initial value	0.023	
Aged value	0.026	ASTM C 518/19
Closed cell content, apparent vol, [%]	95 to 98	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	1.5	
With skin retained	1	ASTM C 518/91
Water absorption, per cm² [gm/cc]		
Without protection	0.0087	
With protection	0.0019	ASTM C 272
Dimensional stability, % linear change		
7 days @ - 15 °C	<1.0	
7 days @ 100 °C	< 1.5	
7 days @ 70 °C [100% RH]	< 2.0	ASTM D 2126
Fire resistance	Class B2	DIN 4102
Asbestos content	Nil	

2

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $+23^{\circ}\text{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Polyurethane Polyfoam BA

It is used as a blowing agent in the manufacture of polyurethane and polyisocyanurate insulating foams.

CHARACTERISTICS

- ► Excellent Solvency
- Low viscosity
- ► Highly Volatile
- ► Non-Flammable
- ▶ Provides excellent Insulation and foam properties





DESCRIPTION

Polyfoam BA is a colorless hydrochlorofluorocarbon liquid. It is non-flammable. The compound is very volatile with a boiling point of 32°C. It is significantly less ozone-depleting than chlorofluorocarbons (CFC) But is a global warming substance. Its odor is described as ether. Polyfoam BA is practically non-toxic, and It is not allergenic.

FIELDS OF APPLICATION

- Used in the production of rigid polyurethane and polyisocyanurate insulation foams.
- Used as a solvent in electronic and other precision cleaning applications.
- Used in a wide variety of applications, including refrigeration, air conditioning, foam blowing, solvents, aerosols, and fire suppression.

STORAGE

Keep container closed when not in use. DO NOT store in open, unlabeled or mislabeled containers. Store in a cool, wellventilated area of low fire risk. Protect container and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly and replace bung after use and when empty. If container temperature exceeds boiling point, cool the container before opening.



SUPPLY

Polyfoam BA 250Kg drums.

TECHNICAL SPECIFIC	CATION
PROPERTIES	VALUE
Molar Mass	116.95 g/mol
Boiling Point	32°C (90°F)
Freezing Point	-103.5°C
Density	1.227 g/cm³ @ 25°C
Ozone depletion potential	
(ODP) (R11 = 1)	0.11
Global warming potential (GWP)	0.09

TDS Polyfoam BA GCC 0921

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Polyfoam SS-45

Two-component, spray-applied polyurethane foam system

Polyfoam SS 45 is a HCFC blown, polymeric MDI based system to produce rigid spray polyurethane foam.

CHARACTERISTICS

- Spray applied
- ▶ 43-48 Density

DESCRIPTION

Polyfoam SS 45 is a two-component, spray-applied polyurethane foam. Polyfoam SS 45 is an HCFC blown polymeric M.D.I based system for producing rigid urethane foam with a nominal applied density of 45 kg/m³ by spray process. The system may be applied to substrates where the surface temperature is of the order of 10 - 50°C. Grades, adjusted in reactivity, are available for both cold and hot condition.

FIELDS OF APPLICATION

- Roof spraying applications
- Flooring and wall insulation
- Storage tank insulation

COMPONENT PROPERTIES

MDI component is a dark brown colored, polymeric diphenyl methane di-isocyanate (crude M.D.I).

- Viscosity @ 20°C. : 150 200 cps
- Specific Gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol component is a low viscosity blend of polyols, hydrochlorofluorocarbon blowing agent, catalysts and surfactant

- Viscosity @ 20°C approx.450 cps.
- Specific Gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapor. Close all drums after use. Maximum permissible storage time is 6 months.

The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent absorption of moisture.



TDS_Polyfoam SS45_GCC_1023

1

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product.

Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

1:1 by volume.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C)

- Cream time: 3 6 sec.
- Tack-free time: 7 9 sec.
- Free rise density: 36 38 kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

Polyfoam SS45	220kg drum
Polyfoam MDI	250kg drum

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [volume:volume]	1:1	-
Applied density, [kg/m³]	≥ 45	ASTM D 1622
Compressive strength, [Kpa]	≥ 276	ASTM D 1621
Thermal conductivity @ 25°C, [W/mk]	≤ 0.023	ASTM C 518
Closed cell content [%]	≥ 95	ASTM D 6226-21
Water vapor transmission, [perm-inch] all cut surfaces	2	ASTM C 518/91
Water absorption, per cm² [gm/cc] without protective coating	0.0087	ASTM C 272
Dimensional stability, [%] @ - 20°C @ +25°C @ +70°C	Max 2.5 Max 2.5 Max 2.5	ASTM D 2126
Fire Behavior [mm]	Class B3	DIN 4102





oam SS-4

Two-component, spray-applied polyurethane foam system

Polyfoam SS 45A is a HCFC blown & CFC free, polymeric MDI based system to produce rigid spray polyurethane foam.

CHARACTERISTICS

- ► Spray Applied
- CFC Free
- 43-48 Density.



DESCRIPTION

Polyfoam SS 45A is a two-component, spray-applied polyurethane foam that creates a seamless, monolithic barrier against water vapor and air. Polyfoam SS 45A is an HCFC blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam with a nominal applied density of 45 kg/m3 by spray process. The system may be applied to substrates where the surface temperature is of the order of 25 - 30°C. Grades, adjusted in reactivity, are available for both cold and hot condition

FIELDS OF APPLICATION

- Roof spraying applications.
- Flooring and wall insulation.
- Storage tank insulation.

COMPONENTS PROPERTIES

MDI component is a dark brown colored, polymeric diphenyl methane di-isocyanate (crude M.D.I).

- Viscosity @ 20°C.: 150 200 cps
- Specific Gravity @ 20°C 1.24
- NCO content, % wt. 30-31

Polyol Component is a low viscosity blend of polyols, hydrochlorofluorocarbon blowing agent, catalysts and surfactant

- Viscosity @ 20°C approx.450 cps.
- Specific Gravity @ 20°C: 1.16

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapor. Close all drums after use. Maximum permissible storage time is 6 months.

The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at



TDS_Polyfoam SS-45A_GCC_1122

temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent absorption of moisture.

Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

1:1 by volume.

Typical reaction rate and density (laboratory, cup mix) (both components at 20°C)

- Cream Time: 3 6 sec.
- Tack Free Time: 7 9 sec.
- Free Rise Density: 36 38 Kg/m³

Reactivity and density may vary depend on ambient temperature and grade.

SUPPLY

Polyfoam SS 45A	220Kg drum.
Polyfoam MDI	250Kg drum.

1

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	STANDARDS
Mix ratio, [volume:volume]	1:1	-
Final density, [kg/m]	43 to 48	ASTM D 1622
Application thickness, [cm]		
Min	3	
Max	10	
Compressive strength, [kpa]		
With rise	220 to 320	ASTM D 1621
Against rise	172 to 207	
Thermal conductivity @ 25°C, W/(mk)		
Initial value	0.023	ASTM C 518/19
Aged value	0.026	
Closed cell content, apparent vol, %	92 to 93	ASTM D 2856
Water vapor transmission, perm-inch		
All cut surfaces	2	ASTM C 518/91
With skin retained	1	
Water absorption, per cm² (gm/cc)		
Without protective coating	0.0087	ASTM C 272
With protective coating	0.0019	
Dimensional stability, % linear change		
7 days @ - 15°C	<1.0	ASTM D 2126
7 days @ 100°C	2	
7 days @ 70°C [100% RH]	2.5	
Fire resistance	Class B3	DIN 4102





Polyfoam CPS 40BA IM/50

Two Component, Polyurethane Foam System

Polyfoam CPS 40BA IM/50 is a HCFC blown & CFC free, polymeric MDI based system to produce continuous sandwich panels.

CHARACTERISTICS

- ► Continuous Process
- ► CFC Free
- ▶ 40-45 Density



DESCRIPTION

Polyfoam CPS 40BA IM/50 is formulated for continuous line production of metal faced sandwich panels. It is an HCFC-blown & CFC free, polymeric M.D.I based system for producing rigid urethane foam of thickness 50 mm panel with a density 40-45 kg/m³.

FIELDS OF APPLICATION

- Continuous Sandwich Panels

COMPONENTS PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- Viscosity @ 20°C.: 150 200 cps
- Specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31 (Expiry 6 months from production date)

Polyol Component is a blend of polyols, catalysts, surfactants and HCFC-141B

- Viscosity @ 20°C is approx.500 cps.
- Specific gravity @ 20°C: 1.16 (Expiry 6 months from production date)

STORAGE AND HANDLING

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapor. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming



TDS_Polyfoam CPS 40BA IM/50_GCC_0722

1

the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent absorption of moisture. Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

Typical reaction rate and density (laboratory, cup mix)

PolyFoam CPS 40BA IM/50 PBW 100

PolyFoam MDI PBW 130

Two components are mixed at 20°C @3000 RPM.

- Cream Time: 12 16 sec.
- Gel Time: 68 74 sec.
- Free Rise Density: 29 31 kg/m³

Reactivity and density may vary depending upon ambient temperature.

SUPPLY

Polyfoam CPS 40BA IM/50	220Kg drum
Polyfoam MDI	250Kg drum

TYPICAL MECHANICAL PROPERTIES WHEN WELL PROCESSED			
PARAMETERS	UNIT	VALUE	STANDARDS
Ratio	1: 1.3		
Density	Kg/m3	40-45	ASTM D 1622
Compressive Strength	KPa	≥100	ASTM D 1621
Thermal Conductivity @ 25°C	W/m °K	<0.024	ASTM C 518
Dimensional Stability at			
-20°C			
+25°C	%	Max 2.5	ASTM D 2126
+70°C			
Fire Behavior	mm	B3	DIN 4102

Polyfoam CAT 6908

Gelling catalyst, PIR reaction

Polyfoam CAT 6908 is a gelling catalyst developed for rigid foam. It supports in polyisocyanurate reactions.

CHARACTERISTICS

- ► GEL catalyst
- ► For PIR

COMPONENTS PROPERTIES

Catalyst component is clear to pale yellow in color having low viscosity.

- Viscosity @ 20°C. : 250 \pm 100 Cps
- Specific gravity @ 20°C 1.02
- * These values provide general information and are not part of the product specification.

STORAGE AND HANDLING

Store at room temperature in sealed drums. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact. Any updating of safety-relevant information will only be reflected in the MSDS which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in MSDS.

SUPPLY

PolyFoam CAT 6908

180Kg drum



TDS_Polyfoam CAT_GCC_0324





Polyfoam DS-45P

Three Component, Polyurethane Foam System

Polyfoam DS-45P is pentane-based system developed to produce rigid polyurethane foam for continuous line manufacturing of Aluminium Flexi-faced duct board system.

CHARACTERISTICS

- ► Continuous Process
- ► N-Pentane Blowing Agent (Added at customer end)
- ▶ Density approx.: 45 Kg/m³.



DESCRIPTION

Polyfoam DS 45P is three component system developed to produce core rigid foam for continuous line manufacturing of Aluminium Flexi-faced duct board system. The system is designed to be used with N-pentane as blowing agent. Boards of 20 mm can be produced with densities approx.: around 45 kg/m³. Quantity of pentane is added by the customer during process to get the required densities.

FIELDS OF APPLICATION

- 20mm Duct Board

COMPONENTS PROPERTIES

MDI component is a dark brown colored, undistilled grade of polymeric diphenyl methane di-isocyanate (crude M.D.I).

- Viscosity @ 20°C.: 150 200 cps
- Specific gravity @ 20°C 1.24
- NCO content, % wt. 30-31 (Expiry 6 months from production date)

Polyol Component is a blend of polyols, catalysts, and surfactant

- Viscosity @ 20°C is approx.800 12000 cps.
- Specific gravity @ 20°C: 1.18 (Expiry 6 months from production date)

STORAGE AND HANDLING:

Store at room temperature in sealed drums. Moisture will react with this component to produce a surface skin of polymerized material. Protect from moisture and moisture vapour. Close all drums after use. Maximum permissible storage time is 6 months. The ideal storage temperature is between +20°C and +25°C. MDI may undergo partial crystallization at temperature below 0°C. The product can, however, be brought back into the liquid state by placing the container in a heating cabinet and carefully warming the entire contents for a short time to a maximum of 70°C. Polyol might store at room temperature (below 25°C.) in sealed drums. Close all drums after use to prevent absorption of moisture.



Safety goggles, impermeable protective gloves and overalls should always be worn when handling this product. Contaminated clothing should be removed immediately to prevent further skin contact.

MIX RATIO

Typical reaction rate and density (laboratory, cup mix)

PolyFoam DS 45P	PBW	30.0
N-Pentane	PBW	3.3
PolyFoam MDI	PBW	57.0

Three components are mixed at 20°C @3000 RPM.

- Cream Time: 10 - 14 sec.

- Gel Time: 38 - 45 sec.

Tack Free Time: 43 - 55 sec.

- Free Rise Density: 29 - 31 kg/m3

Reactivity and density may vary depending upon ambient temperature.

Formulation When Processing in Machine:

PolyFoam DS 45P	PBW	100
N-Pentane	PBW	11
PolyFoam MDI	PBW	190

*However, slight formulation adjustment might be required while running the line to achieve the requirement of the customer.

The temperature of the raw material components should be approx. 23 °C. The laminating tunnel must be preheated to approx. 50-55 °C.

NOTE

The following must be considered when handling Isomers of pentane:

It is extremely flammable and can form explosive mixtures with air. Since it is heavier than air, it can accumulate on the

floor or nearby place or shafts. Therefore, avoid and keep the ignition sources far away as possible. Always to keep the safety data sheet of the pentane supplier, the instructions of the device manufacturer (about earthing and explosion protection) and the requirements in the plant permit issued by the local authorities.

SUPPLY		
Polyfoam DS 45P	220 Kg drum	
Polyfoam MDI	250 Kg drum	

TYPICAL MECHANICAL PROPERTIES WHEN WELL PROCESSED					
PARAMETERS	UNIT	VALUE			
Density	Kg/m³	45			
Compressive Strength	KPa	≥100			
Thermal Conductivity	W/m °K	< 0.024			
Dimensional Stability at -20°C +25°C +70°C	%	Max 2.5			
Closed Cell	%	≥90			





02 SEALANT SOLUTIONS

POLYSULPHIDE SEALANTS

Polyseal PS GG
Two-part gun grade polysulphide joint sealant

Polyseal PS PG Two-part pouring grade polysulphide joint sealant

Polyseal CR Two-part chemical resistant polysulphide joint sealant

Polyseal PS+ Two-part gun grade polysulphide sealant for wide joints

POLYURETHANE SEALANT

Polyseal 1PU One-part polyurethane joint sealant

BITUMEN SEALANT

Bitumastic Bitumen rubber mastic sealant

PRIMER

Polyprime PS Primer for porous joints

ANCILLARIES

Polyrod Closed cell polyethylene backing rod

Polyboard Bitumen impregnated compressible fibre filler board

Polyboard PE Polyethylene joint filler board

Polyboard 35

Bitumen impregnated compressible fibre filler board





Polyseal PS GG

2 part gun grade polysulphide joint sealant

Highly flexible, non-staining joint sealant with excellent recovery.

CHARACTERISTICS

- ▶ Highly resilient with excellent recovery characteristics
- ▶ Provides permanent and uniform watertight seal
- ► Non-staining
- ► Excellent resistance to fatigue and stays flexible throughout its service life won't become brittle, caulk or crack due to ultra violet exposure
- ► Prevents uncontrolled cracking by allowing expansion and contraction during temperature changes
- ► Excellent adhesion to most common building substrates
- ► Good resistance to ageing. Retains joint soundness once cured
- Resistance against mild chemicals, hydrocarbon fuels, sea water
- ► Non-toxic once cured. Can be used in potable water reservoirs and swimming pools
- Does not Contain Asbestos, Chromated copper arsenate and Lead







DESCRIPTION

Polyseal PS GG is a non slumping two component, chemically curing polysulphide joint sealant. Polyseal PS GG is specifically designed to be used as a watertight seal for moderate movement and control joints. It is based on a liquid polysulphide polymer which when mixed with the hardener, cures to form a tough, flexible and non staining rubber like seal. Polyseal PS GG has excellent adhesion to concrete, stone, metals and other common building substrates. The cured sealant has good resistance to most environmental chemicals & resists deterioration on prolonged exposure to UV. Polyseal PS GG is suitable for use in both vertical and horizontal applications. The sealant has a movement accomodation factor (MAF) of $\pm 25\%$.

FIELDS OF APPLICATION

Sealing of movement and control joints in:

- bridge decks and highway pavements
- water treatment structures
- airport runways and apron pavements
- metal & concrete sea walls
- parapet walls









TDS_Polyseal PS GG_GCC_0625

1

- basements & super structures
- sealing of roofing flashing penetrations & terminations.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Joint preparation

The joint edges must be clean, dry and free from oil, loose particles, cement laitance and other contaminants which may affect the adhesion. A thorough wire brushing,



For illustration purpose only

grinding, sand blasting or solvent cleaning may be required to expose a clean and sound substrate. The compressible joint filler shall be cut back to expose a uniform joint depth.

Priming

Primer shall be applied to a clean and dry surface prior to the installation of backer rod or bond breaking tape. Polyprime PS* is recommended to be applied on porous substrates. For non-porous substrates such as steel or glass Polyprime NP* is recommended for optimum adhesion. The primer shall be applied by a brush in a thin coat application and shall be allowed to become tack free prior to the application of the sealant. The joint edges shall be



For illustration purpose only

re-primed if the sealant installation is not carried out within 3 hours of application of the primer. For obtaining a clean and neat finish, masking tape shall be applied on both the edges of the joint before applying the primer.

Back-up material

A bond breaking backing rod (Polyrod)* shall be inserted into all movement joints to avoid a three sided adhesion. Use of a backing rod will ensure proper joint depth and at the same time facilitating the formation of an hour glass profile on the applied sealant. The backer rod will also provide resistance to sealant tooling pressure and help to attain proper wetting of the substrate when the sealant is being tooled. The diameter of the backing rod shall be at least 20% larger but not greater than 33% of the joint width. This will ensure that the backer rod remains in compression and in place during sealant installation. For static and joints where the depth is not sufficient for the use



For illustration purpose only

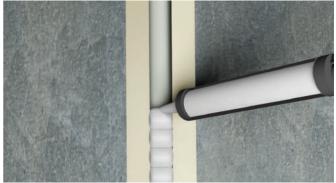
of the backing rod, a bond breaking tape may be applied to prevent the three side adhesion.

CAUTION: Do not damage or poke holes in the backer rod during or after installation, since this may cause air bubbles in the sealant and affect its performance.

MIXING & APPLICATION

Polyseal PS GG is available in a ready to mix container, with all the components packed in a single tin. The material shall be mixed thoroughly with a slow speed drill (300-400 rpm) fitted with a flat bladed paddle for 2-3 minutes till a uniform colour and consistency is achieved.

DO NOT PART MIX. Since the base and the curing agent ratio controls the ultimate physical properties like adhesion, durability and strength, one complete kit has to be mixed at a time. The side and base of the container shall be periodically scrapped with a scrapper to ensure that the curing agent is properly dispersed and blended into the mix. Load the sealant immediately into the barrel gun by a heavy duty follower plate. Remove the cap and nozzle from the gun and ensure that the plunger is pushed all the way forward. The follower plate shall be placed on the flat surface on top of the pail. Place the barrel gun over the lip of the follower plate and depress the release plate and draw the material into the barrel by pulling back the plunger slowly. Fix the nozzle and start extruding into the joint firmly by maintaining an even pressure on the trigger of the gun. On vertical joints, sealant extrusion shall start from the bottom of the joint and continued to the top. For deep vertical joints, the sealant shall be filled in 2 to 3



For illustration purpose only

applications in order to avoid air entrapment and sagging. Once the sealant has been installed a suitable rounded tool soaked in a soapy water solution can be used to achieve a smooth hour glass profile. Any masking tape applied should be removed immediately after the sealant is installed.

LIMITATIONS

Polyseal PS GG is not recommended for:

- joints greater than 30mm width



For illustration purpose only

- overhead joints
- movement joints having MAF > 25%
- damp and contaminated surfaces
- asphalt pavements
- over painting (paint compatibility with sealant shall be checked prior to painting)

JOINT DESIGNS

The width of the joint should be a minimum of 4 times the anticipated movement. Joints with cyclic movement should have a width to depth ratio of 2:1 for butt joints and 1:1 for floor, static and lap joints. The joint depth shall not exceed the width. The joint width and depth should be maintained as recommended:

Joint Width





For illustration purpose only

- ▶ 6 mm (minimum)
- ► 30 mm (maximum)

Joint depth

- ▶ 6 mm
- ➤ 20mm for heavily trafficked floor joints and areas exposed to hydrostatic pressure

COVERAGE

Length of joints in meters filled per 1L of Polyseal PS GG

Depth [mm]	Width [mm]					
	6	10	15	20	25	30
6	27.5	16.5				
10		10	6.5	5		
15			4.4	3.3	2.6	2.2
20				2.5	2.0	1.6
25					1.6	1.3

[#] Calculation based on theoretical coverage.

Actual material consumption at site will vary depending on the wastage.

MAINTENANCE

If the sealant is damaged but the bond is intact, cut out the damaged area and recaulk. If the bond has been affected, remove the sealant completely. Clean and prepare the joint in accordance with instructions under "Joint preparation" and recaulk.

CLEANING

Remove all excess sealant with a scraper. Any spillage can be cleaned using Polysolvent. Clean all tools and equipments using similar solvent immediately after the tooling. Hardened materials can be removed mechanically only.

STANDARDS

Polyseal PS GG complies with the requirements of: BS EN ISO 11600:2003 + A1:2011 (formerly BS 4254), BS 5212: part 1, BS 6920 test on suitability with potable water, ASTM C 920 [Type M, Grade NS, Class 25, USE T]

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

DISPOSAL

Mix separate product components in ratio and as supplied in suitable metal containers. Allow the mix to cure completely. Dispose as hazardous waste. It is recommended to use licensed waste disposal contractors and consult the local authority regarding the regulations.

HEALTH & SAFETY

As with all construction chemical products caution should be exercised. Contains manganese dioxide. Which is corrosive and may cause burns to skin if handled without proper protection. Refer the product msds for full details. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polyseal PS GG	2.5L
Polyprime PS	1L pail
Polyprime NP	1L pail
Polysolvent	5L & 20L pails
Ancillaries/equipments	Polyrod, barrel gun, follower plate

PROPERTIES	VALUES	TEST STANDARDS
Color	Grey	-
Density, [g/cc]	1.60±0.05	ASTM D 1475
Consistency	Thixotropic paste	-
Shrinkage	Negligible	ASTM C 531
Application life, [minutes]	>120	BS 4254
Shore 'A' Hardness	20-35	ASTM D 2240
Tack free time, [hours]	5	-
Adhesion to concrete, [N]	>25	BS 4254
Elongation, [%]	>300	ASTM D 412
UV resistance @300 hours	No deterioration	ASTM G 53
Water potability	Passes	BS 6920
Chemical resistance	pH 2.5 to 11.5, Hydrocarbon fuels, vegetable oil,urea, seawater	ASTM D 543
Cracking & chalking after heat ageing @70°C	No deterioration	TT -S- 00227E
Initial cure @ standard condition, [hours]	24	-
Full cure @ standard condition, [days]	7	-
Application temperature, [°C]	+5 to +40	-
Service temperature, [°C]	-20 to +80	-
Reaction to fire	Class A	ASTM E84

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Polyseal PS PG

2 part pouring grade polysulphide joint sealant

Highly flexible, non-staining joint sealant with excellent recovery







CHARACTERISTICS

- ▶ Highly resilient with excellent recovery characteristics
- ▶ Provides permanent and uniform watertight seal
- ► Non-staining
- ► Excellent resistance to fatigue and stays flexible throughout its service life—won't become brittle, caulk or crack due to ultra violet exposure
- ► Prevents uncontrolled cracking by allowing expansion and contraction during temperature changes
- ► Excellent adhesion to most common building substrates
- ► Good resistance to ageing. Retains joint soundness once cured
- Resistance against mild chemicals, hydrocarbon fuels, sea water
- ► Non-toxic. Can be used in potable water applications, swimming pools
- Does not Contain Asbestos, Chromated copper arsenate and Lead







DESCRIPTION

Polyseal PS PG is a two component pourable, self leveling polysulphide resin based joint sealant. Polyseal PS PG is specifically designed to be used as a watertight seal for moderate movement and control joints in horizontal areas. It is based on a liquid polysulphide polymer which when mixed with the hardener, cures to form a tough, flexible and non staining rubber like seal. Polyseal PS PG has excellent adhesion to concrete, stone, metals and other common building surfaces. The cured sealant has good resistance to most environmental chemicals & resists deterioration on prolonged exposure to UV. Polyseal PS PG is suitable for use in horizontal areas with a maximum slope gradient of 10%. the sealant has a movement accomodation factor (MAF) of ±25%.

FIELDS OF APPLICATION

Sealing of movement and control joints in:

- structural floor joints
- airport runways and apron pavements
- industrial warehouses
- garages & workshops
- swimming pool floors



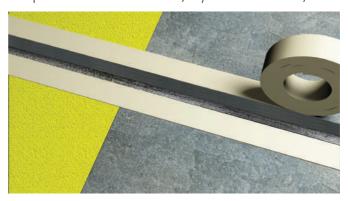
ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Joint preparation

The joint surface must be clean, dry and free from oil,



For illustration purpose only

loose particles, cement laitance and other contaminants which may affect the adhesion. A thorough wire brushing, grinding, sand blasting or solvent cleaning may be required to expose a clean and sound substrate. The compressible joint filler shall be cut back to expose a uniform joint depth.

Priming

Primer should be applied to clean, dry surface prior to the installation of backer rod or bond breaking tape. Polyprime PS* is recommended to be applied on porous substrates. For non-porous substrates such as steel or glass, use Polyprime NP* for optimum adhesion. The primer shall be applied by a brush in a thin coat application and shall be allowed to become tack free prior to the application of the



For illustration purpose only

sealant. The joint edges shall be re-primed if the sealant installation is not carried out within 3 hours of application of the primer. For obtaining a clean and neat finish, masking tape shall be applied on both the edges of the groove before applying the primer.

Back-up material

A bond breaking backing rod (Polyrod)* shall be inserted into all movement joints to avoid a three sided adhesion. Use of a backing rod will ensure proper joint depth and at the same time facilitate the formation of an hour glass profile on the applied sealant. The backer rod will also provide resistance to sealant tooling pressure and help to attain proper wetting of the substrate when the sealant is being tooled. The backing rod being inserted into the joint shall be of a diameter which is at least 20% larger but not greater 33% of the joint width. This will ensure that the backer rod remains in compression and in place during sealant installation. For static and joints where the depth is not sufficient for the use of the backing rod, a bond breaking tape may be applied to prevent the three side adhesion

CAUTION: Do not damage or poke holes in the backer rod during or after installation, since this may cause air bubbles in the sealant and affect its performance.



For illustration purpose onl

MIXING & APPLICATION

Polyseal PS PG is supplied in pre-weighed two parts pack which requires on site mixing. Pour the hardener (part B) into the base (part a) pail and mix thoroughly with a slow speed drill (300-400 rpm) fitted to a flat bladed paddle for 1-2 minutes till a uniform colour and consistency is achieved.

DO NOT PART MIX. Since the base and the curing agent ratio controls the ultimate physical properties like adhesion, durability and strength, one complete kit has to be mixed at a time. The side and base of the container shall be



For illustration purpose only

periodically scrapped with a scrapper to ensure that the curing agent is properly dispersed and blended in the mix. Pour the mixed material directly into the joint from the pail. Once the sealant has been installed a suitable rounded tool soaked in soapy water can be used to achieve an hour glass profile. Any masking tape applied should be removed immediately after the sealant is installed.

LIMITATIONS

Polyseal PS PG is not recommended for:

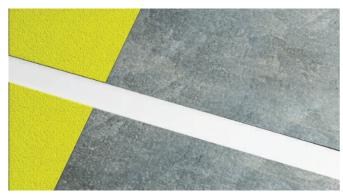
- vertical joints
- movement joints having maf >25%
- damp and contaminated surfaces
- asphalt pavements
- over painting (paint compatibility with sealant shall be checked prior to painting) 4Joints >50mm width

JOINT DESIGNS

The width of the joint should be a minimum of 4 times the anticipated movement. Joints with cyclic movement should have a width to depth ratio of 2:1 for butt joints and 1:1



or illustration purpose only



For illustration purpose only

for floor, static and lap joints. The joint depth shall not exceed the width. The joint width and depth should be maintained as recommended:

Joint Width

- 6 mm (minimum)
- 50 mm (maximum)

Joint depth

- 6 mm
- 20mm for heavily trafficked floor joints and areas exposed to hydrostatic pressure

CLEANING

Remove all excess sealant with a scraper. Any spillage can be cleaned using Polysolvent. Clean all tools and equipments using similar solvent immediately after the tooling. Hardened materials can be removed mechanically only.

COVERAGE

Length of joints in meters filled per 1L of Polyseal PS PG

Depth [mm]		Widt	h [mm]				
	6	10	15	20	25	30	40	50
6	27.5	16.5						
10		10	6.5	5				
15			4.4	3.3	2.6	2.2		
20				2.5	2.0	1.6		
25					1.6	1.3	1	0.8
30						1.1	0.83	0.67

[#] Calculation based on theoretical coverage. Actual

material consumption at site will vary depending on the wastage.

MAINTENANCE

If the sealant is damaged but the bond is intact, cut out the damaged area and recaulk. If the bond has been affected, remove the sealant completely. Clean and prepare the joint in accordance with instructions under "Joint preparation" and recaulk.

STANDARDS

Polyseal PS PG complies with the requirements of: BS EN ISO 11600:2003 + A1:2011 (formerly BS 4254), BS 5212: Part 1, BS 6920 test on suitability with potable water, ASTM C 920 [Type M, Grade P, Class 25, USE T]

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

DISPOSAL

Mix separate product components in ratio and as supplied in suitable metal containers. Allow the mix to cure completely. Dispose as hazardous waste. It is recommended to use licensed waste disposal contractors and consult the local authority regarding the regulations

HEALTH & SAFETY

As with all construction chemical products caution should be exercised. Contains manganese dioxide. Which is corrosive and may cause burns to skin if handled without proper protection. Refer the product msds for full details. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polyseal PS PG	4L
Polyprime PS	1L pail
Polyprime NP	1L pail
Polysolvent	5L & 20L pails
Ancillaries/equipments	Polyrod

PROPERTIES	VALUES	TEST STANDARDS
Color	Grey	-
Density, [g/cc]	1.35±0.05	ASTM D 1475
Consistency	Free flowing	-
Shrinkage	Negligible	ASTM C 531
Application life, [minutes]	>120	BS 4254
Shore 'A' Hardness	15-30	ASTM D 2240
Tack free time, [hours]	5	-
Adhesion to concrete, [N]	>25	BS 4254
Elongation, [%]	>300	ASTM D 412
UV resistance @300, [hours]	No deterioration	ASTM G 53
Water potability	Passes	BS 6920
Chemical resistance	pH 2.5 to 11.5, Hydrocarbon fuels, vegetable oil, urea, seawater	ASTM D 543
Cracking & chalking after heat ageing @70°C	No deterioration	TT-S-00227E
Initial cure @ standard conditions, [hours]	24	-
Full cure @standard conditions, [days]	7	-
Application temperature, [°C]	+5 to +40	-
Service temperature, [°C]	-20 to +80	-
Reaction to fire	Class A	ASTM E84

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Polyseal CR

2 part chemical resistant polysulphide joint sealant

Chemical, fuel & effluents resistant joint sealant with higher flexibility.



CHARACTERISTICS

- High resistance against industrial chemicals, hydrocarbon fuels and effluents
- ► Highly resilient with excellent recovery characteristics
- ► Provides permanent and uniform watertight seal
- ► Can be used in submerged conditions. Resists up to 50m Hydrostatic pressure
- ► Excellent adhesion to most common building substrates
- ► Excellent resistance to fatigue and stays flexible throughout its service life—won't become brittle, caulk or crack due to ultra violet exposure
- Good resistance to ageing. Retains joint soundness once cured
- Prevents uncontrolled cracking by allowing expansion and contractions during temperature changes
- ► Non-toxic. Can be used in potable water reservoirs and swimming pools







DESCRIPTION

Polyseal CR is a two component, chemical resistant polysulphide joint sealant. Polyseal CR is specifically designed to be used as a watertight seal for moderate movement and control joints in areas subjected to industrial chemicals, hydrocarbon fuels and effluents. It is based on a liquid polysulphide polymer which when mixed with the hardener, cures to form a tough, flexible and non staining rubber like seal. Polyseal CR has excellent adhesion to concrete, stone, metals and other common building substrates. The cured sealant has good resistance to deterioration on prolonged exposure to UV. Polyseal CR is available in two different grades. Polyseal CR black is resistant to chemical and sewage effluents. Polyseal CR grey is resistant to hydrocarbon fuels. The sealant has a movement accomodation factor (MAF) of $\pm 25\%$.

FIELDS OF APPLICATION

Sealing of movement and control joints in:

- chemicals spillage areas & storage tanks
- fuel spillage areas and storage tanks
- sea walls & marine structures



- waste water effluent treatment structures
- bridge decks and highway pavements
- airport runways and apron pavements
- industrial floors

APPLICATION INSTRUCTIONS

Joint preparation

The joint edges must be clean, dry and free from oil, loose particles, cement laitance and other contaminants which may affect the adhesion. A thorough wire brushing, grinding, grit blasting or solvent cleaning may be required to expose a clean and sound substrate. The compressible joint filler shall be cut back to expose a uniform joint depth.

Priming

Primer shall be applied to a clean and dry surface prior to the installation of backer rod or bond breaking tape. Polyprime PS* is recommended to be applied on porous substrates. For nonporous substrates such as steel or glass Polyprime NP* is recommended for optimum adhesion. The primer shall be applied by a brush in a thin coat application and shall be allowed to become tack free prior to the application of the sealant. The joint edges shall be re-primed if the sealant installation is not carried out within

3 hours of application of the primer. for obtaining a clean and neat finish, masking tape shall be applied on both the edges of the joint before applying the primer.

Back-up material

A bond breaking backing rod (Polyrod)* shall be inserted into all movement joints to avoid a three sided adhesion. For static and joints where the depth is not sufficient for the use of the backing rod, a polyethylene bond breaking tape may be applied to prevent three sided adhesion.

MIXING & APPLICATION

Gun grade: Polyseal CR gun grade is available in a ready to mix container, with all the components packed in a single tin

Pouring grade: Polyseal CR pouring grade is supplied in preweighed two parts pack, which requires on site mixing by pouring the hardener (Part B) into the base (part a) pail. Mix the material thoroughly with a slow speed drill (300-400 rpm) fitted with a flat bladed paddle for 1-3 minutes till a uniform colour and consistency is achieved.

DO NOT PART MIX. Since the base and the curing agent ratio controls the ultimate physical properties like adhesion, durability and strength, one complete kit has to be mixed at a time. The side and base of the container shall be periodically scrapped with a scrapper to ensure that the curing agent is properly dispersed and blended into the mix. Load the gun grade sealant immediately into the barrel gun by a heavy duty follower plate. Start extruding into the joint firmly by maintaining an even pressure on the trigger of the gun. On vertical joints, sealant extrusion shall start from the bottom of the joint and continued to the top. For deep vertical joints, the sealant shall be filled in 2 to 3 applications in order to avoid air entrapment and sagging. The pouring grade material can be poured directly into the joint from the pail. Once the sealant has been installed a suitable rounded tool soaked in a soapy water solution can be used to achieve a smooth hour glass profile. Any masking tape applied should be removed immediately after the sealant is installed.

CLEANING

Remove all excess sealant with a scraper. any spillage can be cleaned using Polysolvent. Clean all tools and equipments using similar solvent immediately after the tooling. Hardened materials can be removed mechanically only.

LIMITATIONS

Polyseal CR is not recommended for:

- joints greater than 30mm width for gun grade and 50mm width for pouring grade
- overhead joints
- movement joints having MAF > 25%
- damp and contaminated surfaces
- asphalt pavements
- over painting (paint compatibility with sealant shall be checked prior to painting)

JOINT DESIGNS

Joints with cyclic movement should have a width to depth ratio of 2:1 for butt joints and 1:1 for floor, static and lap joints. The joint depth shall not exceed the width. The joint width and depth should be maintained as recommended:

Joint Width

- ▶ 6 mm (minimum)
- ▶ 30 mm (maximum)

Joint depth

- ▶ 6 mm
- ➤ 20mm for heavily trafficked floor joints and areas exposed to hydrostatic pressure.

COVERAGE

Length of joints in meters filled per 1 I of Polyseal CR

Dept	h [mm]			\	Midth [r	nm]		
	6	10	15	20	25	30	40	50
6	27.5	16.5						
10		10	6.5	5				
15			4.4	3.3	2.6	2.2		
20				2.5	2.0	1.6		
25					1.6	1.3	1	0.8
30						1.1	0.83	0.67

Actual material consumption at site will vary depending on the wastage.

MAINTENANCE

If the sealant is damaged but the bond is intact, cut out the damaged area and recaulk. If the bond has been affected, remove the sealant completely. Clean and prepare the joint in accordance with instructions under "Joint preparation" and recaulk.

STANDARDS

Polyseal CR complies with the requirements of: BS EN ISO 11600:2003 + A1:2011 (formerly BS 4254), BS 5212; part 1 ASTM C 920 [Type M, Grade P & NS, Class 25%, USE T]

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

DISPOSAL

Mix separate product components in ratio and as supplied in suitable metal containers. Allow the mix to cure completely. Dispose as hazardous waste. It is recommended to use licensed waste disposal contractors and consult the local authority regarding the regulations.

HEALTH & SAFETY

As with all construction chemical products caution should be exercised. Contains manganese dioxide. Which is corrosive and may cause burns to skin if handled without proper protection. Refer the product MSDS for full details. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

CHEMICAL RESISTAL	NCE		
Chemical	Black	Grey	
Alcohol, 100%	+	+	
Ammonia solution, 10%	+	+	
Acetic acid, 10%	0	-	
Aviation fuel	+	0	
Battery acid	0	-	
Brake fluid	+	+	
Citric acid, 5%	+	-	
Caustic soda, 50%	+	+	
Chlorine	+	+	
Diesel	+	+	
Glycerin	+	+	
Hydrochloric acid, 20%	0	-	
Kerosene	+	+	
Lactic acid, 5%	+	-	
Nitric acid, 5%	0	-	
Petrol	+	+	
Sulphuric acid, 10%	+	-	
Vegetable oil	+	+	
White spirit	+	+	
Toluene	+	+	
to the second	1		

^{+ =} resistance, o = limited resistance,

^{- =} not resistant

SUPPLY	
Polyseal CR Gun grade Pouring grade	2.5L 4L
Polyprime PS	1L pail
Polyprime NP	1L pail
Polysolvent	5L & 20L pails
Ancillaries/equipments	Polyrod, barrel gun, follower plate

TECHNICAL SP	ECIFICATION	
PROPERTIES	VALUES	TEST STANDARDS
Color	Grey (black on request)	-
Density, [g/cc], gun grade pouring grade	1.55±0.05 1.30±0.05	ASTM D 1475
Application life, [minutes]	≥90	BS 4254
Shore 'A' Hardness Gun grade Pouring grade	35-50 15-35	ASTM D 2240
UV resistance @300 hours	No deterioration	ASTM G 154
Adhesion to concrete, [N]	>25	BS 4254
Chemical resistance	pH 2.5 to 11.5, Hydrocar bon fuels, aviation fuel, Hydrau fluid,sea water.	ASTM D 543
Initial cure @standard condition, [hours]	24	-
Full cure @standard condition, [days]	7	
Application temperature, [°C]	+5 to +40	-
Service temperature, [°C]	-20 to +80	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polyseal PS+

2 part gun grade polysulphide sealant for wide joints

Highly flexible, non-staining joint sealant with excellent recovery for wider joint.





CHARACTERISTICS

- ▶ Highly resilient with excellent recovery characteristics
- ▶ Provides permanent and uniform watertight seal
- ▶ Non-staining
- Excellent resistance to fatigue and stays flexible throughout its service life—won't become brittle, caulk or crack due to ultra violet exposure
- ► Prevents uncontrolled cracking by allowing expansion and contractions during temperature changes
- ► Excellent adhesion to most common building substrates
- ► Good resistance to ageing. Retains joint soundness once
- Resistance against mild chemicals, hydrocarbon fuels, sea water
- ► Non-toxic. Can be used in potable water applications, swimming pools





DESCRIPTION

Polyseal PS+ is a two component non slumping, chemically curing sealant for wide joints. It is based on a liquid polysulphide polymer which when mixed with the hardener, cures to form a tough, flexible and non staining rubber like seal. Polyseal PS+ is specifically designed to be used as a watertight seal for overhead moderate movement joints and joints with widths greater than 30mm. Polyseal PS+ has excellent adhesion to concrete, stone, metals and other common building substrates. The cured sealant has good resistance to most environmental chemicals & resists deterioration on prolonged exposure to UV. The sealant has a movement accomodation factor (MAF) of ±25%.

FIELDS OF APPLICATION

- overhead and vertical movement and control joints
- joint width between 30mm and 50 mm

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Joint preparation

The joint surface must be clean, dry and free from oil, loose particles, cement laitance and other contaminants which may



TDS_Polyseal PS+_GCC_0322

1

affect the adhesion. A thorough wire brushing, grinding, sand blasting or solvent cleaning may be required to expose aclean and sound substrate. The compressible joint filler shall be cut back to expose a uniform joint depth.

Primina

The primer Polyprime PS* shall be applied to clean, dry surfaces prior to the installation of backer rod. The primer Polyprime PS* shall be applied to clean, dry surfaces prior to the installation of backer rod.

Back-up material

A bond breaking backing rod (Polyrod)* shall be inserted into all movement joints to avoid a three sided adhesion. For static and joints where the depth is not sufficient for the use of the backing rod, a bond breaking tape may be applied to prevent the three side adhesion.

MIXING & APPLICATION

Polyseal PS+ is available in a ready to mix container with all the components packed in a single tin. The material shall be mixed thoroughly with a slow speed drill (300-400 rpm) fitted with a flat bladed paddle for 2-3 minutes till a uniform colour and consistency is achieved. DO NOT PART MIX. Since the base and the curing agent ratio controls the ultimate physical properties like adhesion, durability and strength, one complete kit has to be mixed at a time. The side and base of the container shall be periodically scrapped with a scrapper to ensure that the curing agent is properly dispersed and blended in the mix. Load the

sealant immediately into the barrel gun by a heavy duty follower plate. Start extruding into the joint firmly by maintaining an even pressure on the trigger off the gun. Vertical joint sealing shall commence from the bottom of the joint and continued to the top. Overhead sealing shall start from one end of the joint. Once the sealant has been installed a suitable rounded tool soaked in a soapy water solution can be used to achieve a smooth hour glass profile. Any masking tape applied should be removed immediately after the sealant is installed.

CLEANING

Remove all excess sealant with a scraper. Any spillage can be cleaned using Polysolvent. Clean all tools and equipments using similar solvent immediately after the tooling. Hardened materials can be removed mechanically only.

LIMITATIONS

Polyseal PS+ is not recommended for:

- Movement joints having MAF > 25%
- Damp and contaminated surfaces
- Asphalt pavements
- Over painting (paint compatibility with sealant shall be checked prior to painting)
- Joint >50mm width

JOINT DESIGNS

The width of the joint should be a minimum of 4 times the anticipated movement. Joints with cyclic movement should have a width to depth ratio of 2:1 for butt joints and 1:1 for control and lap joints. The joint depth shall not exceed the width.

COVERAGE

Length of joints in meters filled per 1 L of Polyseal PS+

Depth [mm]	Width [mm]				
	20	25	30	40	50
10	5				
15	3.3	2.6	2.2		
20	2.5	2	1.6	1.25	
25		1.6	1.3	1	0.8
30			1.1	0.8	0.66
40				0.6	0.5
50					0.4

Calculation based on theoretical coverage. Actual material consumption at site will vary depending on the wastage.

STANDARDS

Polyseal PS+ complies with the requirements of: BS EN ISO 11600:2003 + A1:2011 (formerly BS 4254), BS 5212: Part 1, BS 6920, ASTM C 920 [Type M, Grade NS, Class 25 USE T].

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in un-opened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should be exercised. Contains manganese dioxide. Refer the product MSDS for full details. Which is corrosive and may cause burns to skin if handled without proper protection. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately

SUPPLY	
Polyseal PS+	2.5L pail
Polyprime PS	1L pail
Polyprime NP	1L pail
Polysolvent	5L & 20L pails
Ancillaries/equipments	Polyrod barrel gun, follower Plate

TECHNICAL SPECIFICATION					
PROPERTIES	VALUES	TEST STANDARDS			
Color	Grey	-			
Density, [g/cc]	1.6±0.05	ASTM D 1475			
Viscosity	Thixotrophic paste	-			
Shrinkage	Negligible	ASTM C 531			
Application life, [minutes]	>120	BS 4254			
Shore 'A' Hardness	20-35	ASTM D 2240			
Tack free time, [hours]	5	ASTM C 679			
Adhesion to concrete, [N]	>25	BS 4254			
UV resistance @300, [hours]	No deterioration	ASTM G 154			
Suitability with potable water	Non toxic	BS 6920			
Chemical resistance	pH 2.5 to 11.5 hydrocarbon fue veg. oil, sea wa				
Initial cure @ standard condition, [hours]	24	-			
Full cure @standard condition, [days]	7	-			
Application temperature, [°C]	+5 to +40	-			
Service temperature, [°C]	-20 to +80	-			

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}$ C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Polyseal 1PU

One part polyurethane joint sealant

Highly flexible, non-staining paintable joint sealant with excellent recovery.



CHARACTERISTICS

- ▶ Highly resilient with excellent recovery characteristics
- ► Provides permanent and uniform watertight seal
- ► Excellent adhesion to most building substrates. Can be used without the use of primer in new substrates
- ► Non-toxic. Can be used in potable water reservoirs and swimming pools
- ► Easy to apply, one component sealant. No mixing required
- ► Overpainting can be done (Rigid paints may crack)







DESCRIPTION

Polyseal 1PU is a one part low modulus high performance polyurethane sealant, which cures on absorption of atmospheric moisture to form a firm and flexible rubber watertight seal for moderate movement and control joints. Polyseal 1PU can be used in both horizontal and vertical applications. The sealant has a Movement Accomodation Factor (MAF) of $\pm 25\%$.

FIELDS OF APPLICATION

- concrete expansion joints
- precast concrete cladding
- brick cladding
- perimeter caulking (windows, doors, aluminium frames)
- expansion and constructions joints in water retaining structures
- curtain wall joints
- parapet walls

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content).

APPLICATION INSTRUCTIONS

Joint preparation

The joint edges must be clean, dry and free from oil, loose particles, cement laitance and other contaminants which may affect the adhesion. A thorough wire brushing, grinding, sand blasting or solvent cleaning may be required to expose a clean and sound substrate. When applied on glazed surfaces like



TDS_Polysed| 1PU_GCC_0623

1

ceramic or terrazzo tiles or porcelain enamel joint surfaces, the glaze should be removed by abrading with sandpaper or wire brush.

Priming

On new substrates, the sealant can be applied without Primer. However, for old and very porous substrates apply Polyprime PS*. When applying on aluminium and metal surfaces, ensure the surface is cleaned of all lacquer or protective coatings. Galvanized, copper and stainless steel surfaces shall be primed with Polyprime NP*.

Back-Up Material

A bond breaking backing rod (Polyrod)* shall be inserted into all movement joints to avoid a three sided adhesion. A bond breaking tape may be applied to joints where the depth does not allow the application of the backing rod.

APPLICATION

Polyseal 1PU is available in a ready to use self contained sausage which can be loaded onto a barrel gun. Start extruding the sealant into the joint firmly by maintaining an even pressure on the trigger of the gun. On vertical joints, sealant extrusion shall start from the bottom of the joint and continued to the top. Once the sealant has been installed a suitable rounded tool can be used to achieve a smooth hour glass profile. DO NOT USE SOAPY WATER SOLUTION. Any masking tape applied should be removed immediately after the sealant is installed.

CLEANING

Remove all excess sealant with a scraper. Any spillage can be cleaned using Polysolvent. Clean all tools and equipments using similar solvent immediately after the tooling. Hardened materials can be removed mechanically only.

LIMITATIONS

Polyseal 1PU is not recommended for:

- Movement joints having MAF > 25%
- Damp and contaminated surfaces
- Asphalt pavements
- When overpainting check paint compatibility with sealant
- External application with white / off white colour will result in yellowing on exposure to UV.
- Joints width > 25mm

JOINT DESIGNS

The width of the joint should be a minimum of 4 times the anticipated movement. Joints with cyclic movement should have a width to depth ratio of 2:1 for butt joints and 1:1 for static and lap joints. The joint depth shall not exceed the width. The joint width and depth should be maintained as recommended:

Joint Width

- ▶ 6 mm (Minimum)
- ▶ 25 mm (Maximum)

Joint Depth

- ▶ 6 mm (Minimum)
- ▶ 15 mm (Maximum)

COVERAGE

Length of joints in meters filled per 600 ml sausage of Polyseal 1PU

Depth [mm]	Width [mm]				
	6	10	15	20	25
6	16.6	10	6.7		
10		6	4	3	
15			2.7	2	1.6
20				1.5	1.2
25					1

[#] Calculation based on theoretical coverage. Actual material consumption at site will vary depending on the wastage.

STANDARDS

Polyseal 1PU complies with the requirements of: BS 5212: Part 1, ASTM C 920 [Type S, Grade NS, Class 25] Federal Specification TT-S-00230C [Type II, Class A]

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. Usage: Best before 9 months from manufacturing date. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should be exercised. Adequate ventilation should be provide at the place of work. Refer the product MSDS for full details. Protective clothing such as impervious gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polyseal 1PU	600ml (12 sausages/carton)
Polyprime PS	1L pail
Polyprime NP	1L pail
Polysolvent	5L & 20L pails
Ancillaries/equipments	Polyrod, barrel gun

^{*} Refer to website for TDS

TECHNICAL SPECIFICATION					
PROPERTIES	VALUES	TEST STANDARDS			
Color	White/offwhite /Beige/Grey (Other colors on request)	-			
Density, [g/cc]	1.40 <u>+</u> 0.15	-			
Viscosity	Thixotropic paste	-			
Shrinkage	Negligible	ASTM C 531			
Shore 'A' Hardness @ 7days	30 to 45	ASTM C 920			
Adhesion to concrete, [N]	>25	ASTM C 794			
Elongation, [%]	>250	ASTM D 412			
Chemical resistance	pH 2.5 to 11.5, sea water	ASTM D 543			
Skinning time @standard condition, [min]	25 to 60 maximu	- JM			
Curing rate	2 to 4 mm per day				
-					
Application temperature, [°C]	+5 to +40	-			
Service temperature, [°C]	-20 to +80 -				

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



Bitumen rubber mastic sealant

Flexible joint sealant for filling gaps of pipes / roof flashing and termination of waterproofing membranes.

CHARACTERISTICS

- Flexible joint sealant
- Stability at high ambient temperatures
- Excellent adhesion, strong durable bond
- Single component
- Do not contain asbestos, Chromated copper arsenate and lead







DESCRIPTION

Bitumastic is a single component, solvent based bitumen rubber mastic joint sealant. The sealant on curing forms a tough and flexible seal. It has excellent adhesion to concrete, brickwork, asphalt and most construction material substrates. The mastic sealant is modified with non asbestos fibres to make the sealant thixotropic and slump free when applied on vertical areas.

FIELDS OF APPLICATION

Bitumastic is ideally suited for sealing and filling gaps and joints on roofs, pointing horizontal chases for waterproofing membranes and felts. Sealing around roof/wet service pipes. Pointing between brickwork and roof flashings. Sealing cracks in asphalt and concrete pavements. Filling horizontal joints in concrete and asphalt where movements are not expected.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

COMPOSITION

Bitumastic is a blend of rubber and high quality bitumen carried in a hydrocarbon solvent to improve the application properties. Black in color and exhibiting a non slump consistency it cures by solvent release, to form a tough flexible waterproof seal.

APPLICATION INSTRUCTIONS

Surface preparation

Surface must be free from all dirt, dust and loose material. Any oil and grease contamination must be removed



TDS_Bitumastic_GCC_1022

PRODUCT ONFORMITY

completely. The surface must be made dry prior to the application of the sealant.

Masking

Prior to application of primer and sealant, apply masking tape to the adjacent sides of the joints for getting a neat finish and to avoid the spilling over of the sealant on the edges.

Priming

Under normal circumstances priming is not required. However, for very dry and porous surfaces, it is recommended to apply one coat of a solvent based bitumen primer (Polyprime SB)*. Similarly for joints subjected to continuous immersion, priming is recommended.

Application

The sealant can be applied by means of a spatula or trowel. As the product is solvented, it is recommended to mix the contents of the pail with a paddle mixer for a few minutes prior to the application to ensure a homogenous mix. Sealant application should start form the bottom of the joint/groove and continued to the top. Immediately tool the joint with the spatula or putty knife to smoothen and compress the sealant to effect total contact with joint surfaces. The putty knife shall be moistened with a cleaning solvent to prevent the sealant to adhere to the knife and ensuring a smooth and neat finish. Where masking tape has been employed to keep building surfaces clean, it is advisable to remove them at the moment the sealant filling is completed.

CURING TIME

The sealant cures on solvent release. The initial surface skinning will occur within 24-48 hour, however full cure depends on relative humidity. A 10mm depth of seal will typically cure within 14-21 days @23°C @50% RH.

CLEANING

Tools and equipment should be cleaned immediately after use with a cleaning solvent. Hardened materials can be cleaned mechanically only.

STORAGE & SHELF LIFE

The pails and drums must be stored in a covered, dry and shaded area, away from direct sunlight, UV and other sources of heat and protected from extreme temperatures. The shelf life of the product is up to 12 months if stored as per the recommendations. Excessive exposure to sunlight and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

Bitumastic contains petroleum distillate, is flammable. Keep away from fire, sparks or other source of ignition. Wear protective clothing, rubber gloves, mask and safety goggles.

- 1. Fire flammable when wet.
- Skin avoid repeated or prolonged contact. Remove bitumen stains with a suitable cleaner that is able to remove oil or grease and then clean with soap and water
- 3. Eyes contact could cause irritation. Flush with copious amount of clean water.
- 4. Inhalation can cause dizziness. If difficulty in breathing persists, administer oxygen.

ESTIMATION

Theoretical coverage: linear meter per kg of sealant

Joint Width(mm)

		6	10	12	15	20	25	30	40
(MI	6	27.7	16.6	14	11	8.3	6.6		
n) ر	8		12.5	10.4	8.3	6.2	5	4.1	
depth (mm)	10		10	8.3	6.6	5	4	3.3	2.5
b tr	12			6.9	5.5	4.1	3.3	2.7	2
Joint	15				4.4	3.3	2.6	2.2	1.6
	20					2.5	2	1.6	1.3

SUPPLY	
Bitumastic	20kg pail
Polyprime SB	20L pail & 200L drum

*Refer to website for TDS

TECHNICAL SPECIFICATION					
PROPERTIES	VALUES	TEST STANDARDS			
Color	Black	-			
Form	Paste	-			
Solid content, [%]	>80	ASTM D 2939			
Slump	Nil	-			
Density, [g/cc]	1.3 ± 0.1	ASTM D 1475			
Initial set @ standard condition, [hours]	24 -48				
Full cure @ standard condition, [days] [10mm]	14-21 days				
Chemical resistance	Sea water, chlorides and sulphate ions.	ASTM D 543			
Service temperature, [°C]	0 to 80				
Application temperature, [°C]	5 to 40				

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polyprime PS

Primer for porous joints

Seals the joint surface and increase the adhesion with the joint sealant.



CHARACTERISTICS

- ➤ Strengthens the adhesion of joint sealants to porous surfaces such as concrete, cement brickwork, gypsum board, timber and stone
- ➤ Stabilizes and seals joint surface particularly in harsh environments such as areas subjected to heavy traffic, saline water, fuel or oil spillage areas
- Does not Contain Asbestos, Chromated Copper Arsenate and Lead





DESCRIPTION

Polyprime PS is a single component solvent based adhesion promoting primer for movement and control joints in porous substrates like concrete, block work, asbestos and timber. The primer forms a chemical bridge between the concrete surface and the sealant which is applied into the joint.

FIELDS OF APPLICATION

- concrete & mortar
- brick work
- asbestos
- timber

APPLICATION INSTRUCTIONS

Joint preparation

The joint surface must be clean, dry and free from oil, loose particles, cement laitance and other contaminants which may affect the adhesion. A thorough wire brushing, grinding, sand blasting or solvent cleaning may be required to expose a clean and sound substrate. On painted surfaces all loosely adhering paint must be removed (contamination will reduce the strength of the bond), if in doubt remove all previous decorations. To optimize adhesion of both the primer and the sealant, remove all round or sharp edges and corners. Ensure that the surface is absolutely dry before the primer is applied.

Application

Polyprime PS shall be applied to clean, dry surface prior to the installation of backer rod or bond breaking tape. Polyprime PS can be applied by a brush in one thin and



uniform coat. The sealant shall be applied only after the primer becomes tackfree. A recoat of the primer is required to be applied on the surfaces if the sealant application gets delayed by more than 3 hours after application of the primer. For obtaining a clean and neat finish, masking tape shall be applied on both the edges of the groove before applying the primer and shall be removed once the sealant installation is complete.

CLEANING

Clean all tools with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

COVERAGE						
Depth [mm]	Width [mm]					
	10	15	20	25	30	
10	250	225	200			
15		175	150	140	130	
20			130	120	110	
25				100	95	
30					80	

Linear meter of joint per litre of primer:

Calculation based on theoretical coverage. Actual material consumption at site will vary depending on the wastage.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

Highly flammable liquid. Do not apply near smoke or naked flame. In case of fire, extinguish with carbon dioxide, dry chemical or foam fire extinguisher. Due to the presence of solvents, ensure adequate ventilation is provided in the workplace. As with all chemical products, caution should always be exercised. Protective clothing, such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately. Ensure the container is available for the medical attendant to examine any relevant instructions and content details.

TEC		$C \Lambda I$	CDECIE	ICATION
	пи		SPECIFI	LAILUN

PROPERTIES	VALUES	TEST STANDARDS
Appearance	Viscous clear liquid	-
Density, [g/cc]	0.95±0.05	ASTM D 1475
Drying time, [minutes]	Approx.30	-
Application		
temperature, [°C]	5 to 40	-

All values given are subject to 5-10% tolerance

SUPPLY

Polyprime PS 1L

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Closed cell polyethylene backing rod

Non absorbent backing rod to maintain proper width to depth ratio and avoid 3 side adhesion of sealants.

CHARACTERISTICS

- Controls joint depths and ensures a proper width to depth ratio
- Non absorbent surface eliminates three sided adhesion of the elastomeric sealant
- ► Forces sealant to have maximum sidewall adhesion
- Closed cell structure does not allow the absorption of
- ▶ Lightweight and compressible. Can easily be accommodated in joints of varying widths
- ► Highly resilient. Accommodates dynamic joints
- ► Chemically inert
- ► Fully compatible with a wide variety of sealants
- ▶ Non-staining
- ► Rot proof



DESCRIPTION

Polyrod is a closed cell, non absorbent and chemically inert polyethylene foam flexible rod. Polyrod is designed for use as a compressible joint backing material for elastomeric and a wide variety of cold applied joint sealants.

FIELDS OF APPLICATION

- expansion, isolation, control and coping joints
- highway and pavement joints
- curtain walls
- perimeter of window and door frames
- parking decks
- pre-cast panels
- log home chinking

APPLICATION INSTRUCTIONS

Joint preparation

The joint surface must be clean, dry and free from oil, loose particles, cement laitance and other contaminants which may affect the adhesion. A thorough wire brushing, grinding, sand blasting or solvent cleaning may be required



TDS Polyrod GCC 0118

to expose a clean and sound substrate. On painted surfaces all loosely adhering paint must be removed, if in doubt remove all previous decorations. Remove all round or sharp edges and corners which might perforate or cause damage to the backing rod. The compressible joint filler

Installation

Select a backer rod whose diameter is at least 20% larger but not greater than 33% of the joint width. This will ensure that the backer rod remains in compression and in place during sealant installation. The backing rod shall be inserted into the joint by using a blunt tool or roller and forced gently into the joint till the desired depth is achieved, whilst making no damages to the joints & edges.

shall be cut back to expose a uniform joint depth.

CAUTION

Do not damage or poke holes in the backer rod during or after installation, since this may cause air bubbles in the sealant and affect its performance. Also, do not fold or overly stretch and compress the backer rod during installation. Ensure that it fits in tight against the sides of the joint. Polyrod installation shall be done only after the necessary primer has been applied to the edges of the

STANDARDS

Polyrod complies with the requirements of ASTM C 1330, type $\rm C$.

STORAGE

Store in a cool, dry place and keep away from all sources of heat.

HEALTH & SAFETY

Polyrod is combustible and will ignite if exposed to sources of heat or fire. There is no health hazard associated with the product.

SUPPLY

Polyrod ($(mm \varnothing)$	6	10	15	20	25	30	, 40,	50
i Olylou j	(111111)	U	, 10	, IJ	, 20	, ZJ	, 00	, + 0,	50

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	
Form	Compressible closed cell circular foam cords	

circular foam cords

Color White/grey

Density, [g/cc] 0.03 ± 0.005

Durability Excellent

Dimensional stability Excellent

Service temperature, [°C] -40 to 70

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polyboard

Bitumen impregnated compressible fibre filler board

Excellent recovery with thermal insulation property.

CHARACTERISTICS

- Multi-purpose bituminized softboard made from natural wood fibres for roof, wall and floor in concrete and timber constructions
- ► Excellent recovery after 50% compression
- ► Good thermal insulation properties
- ► Available in various bitumen contents
- ► Easy to install
- Does not Contain Asbestos, Chromated copper arsenate and Lead



DESCRIPTION

Polyboard is a compressible bitumen impregnated fibre board for expansion joints. The impregnated softboard is made from natural wood fibres chips and proprietary materials, mechanically reduced to fibres which are then pressed to form a continuous sheet. Bitumen is incorporated into the board during manufacture to improve its moisture resistance and durability.

FIELDS OF APPLICATION

- external wall cladding: filling structural expansion & structural separation joints in block & insitu concrete construction.
- trafficable surfaces: filling expansion joints in motorways, runways, pedestrian areas, bridges, kerbs.
- internal surfaces: filling expansion joints across concrete floors, including screed floors.
- roofs & floor finishes: ideal for filling expansion joints in concrete floors.
- Building superstructures: filling expansion joints in basements, retaining walls, site slabs, subways & other water excluding structures.
- reinforced concrete structures: expansion joint fillers in piers and lateral supports like abutments.
- expansion strips: against existing or between adjacent constructions and insets in concrete paving like drains, manholes.
- internal finishes: Various other flat works and concrete floors.



TDS_Polyboard_GCC_0224

1

protection of waterproofing membranes and coatings from mechanical abuse and against backfill.

- protection board for pressure-sensitive layers

SPECIFICATION COMPLIANCE

Wood fibre insulating board produced complies with the pertinent type requirement of ASTM D 1751 (compression, extrusion and recovery only). Production standard as per DIN EN 13986 / DIN EN 622-4

INSTALLATION PROCEDURE

When used to form movement joints in in-situ concrete, Polyboard can be positioned next to the shuttering before casting or can be bonded to the adjacent concrete with an appropriate adhesive. The softboard must be protected on external faces by a compatible weather resistant sealant. Polyboard up to a thickness of 19mm can be cut using a stable knife and a guide bar for a straight edge after cutting. To avoid tearing in the reverse face, the cut should be made onto a flat rigid backing material. Boards thicker than 19mm should be cut with a portable electric circular saw.

Protection

Polyboard can be fixed to protect waterproof membrane with a suitable adhesive like Bitubond N or by suitable approved mechanical fixing methods.

STORAGE

Store the boards in a cool, dry and shaded area. The boards should be stacked on a pallet which should be placed on a flat area. Keep away from sharp edges and protect the edges from getting damaged. During installation carry single boards vertically.

HEALTH & SAFETY

There is no health hazards associated with Polyboard in normal use. Polyboard is combustible and will catch fire if exposed to flame or other sources of ignition.

SUPPLY		
Polyboard	12mm 19mm 25mm	1220mm x 2200mm

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Density, [kg/m³]	>220	-	
Color	Brown	-	
Surface	Non-sanded	-	
Maximum extrusion at 50% compression, [mm]	<1	ASTM D 1751	
Recovery at 50% Compression, [%]	>70%	ASTM D 1751	
Compression at 50%, [psi]	>100	ASTM D 1751	
Brittleness	No crack	ASTM 994	
Bitumen content, [%]	10	ASTM D 545	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at loboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polyboard PE

Polyethylene joint filler board

Bitumen free-ideal for water retaining structure with good thermal insulation properties.

CHARACTERISTICS

- ► Non-absorbent and non-tainting. Hence makes it suitable for use in water retaining structures.
- ► Highly resilient the heat welded laminated structure combines greater rigidity and load support, therefore low load transfer.
- Bitumen-free and rot-proof. Ideal for water retaining structures.
- ► Good thermal insulation properties.
- ► Easy to install.
- ► Natural bond breaker
- ▶ Does not Contain Asbestos, Chromated copper arsenate and Lead



DESCRIPTION

Polyboard PE is a non-extruding, non-absorbent, UV resistant, semi-rigid, highly resilient, bitumen free, closed cell polyethylene joint filler for expansion and movement joints in concrete, brickwork and block work.

FIELDS OF APPLICATION

- external wall cladding: filling structural expansion & structural separation joints in block & insitu concrete construction.
- trafficable surfaces: filling expansion joints in motorways, runways, taxiways, aprons, pedestrian areas, bridges, kerbs.
- internal surfaces: filling expansion joints across concrete floors, including screed floors.
- roofs & floor finishes: ideal for filling expansion joints in concrete floors.
- building superstructures: filling expansion joints in basements, retaining walls, site slabs, subways & other water retaining structures.
- reinforced concrete structures: expansion joint fillers in piers and lateral supports like abutments.
- expansion strips: against existing or between adjacent constructions and insets in concrete paving like drains, manholes, etc.



TDS_Polyboard PE_GCC_0924

1

- internal finishes: various other flat works and concrete floors according to the state of the art and local regulations.
- used for weight distributing layer in combination with a leveling compound.

SPECIFICATION COMPLIANCE

Closed cell polyethylene board produced complies with the pertinent type requirement of ASTM D 1752 (compression, extrusion and recovery only). Production standard as per DIN EN 13986 / DIN EN 622-4

INSTALLATION PROCEDURE

Joint sealing slots: When forming expansion joints with Polyboard PE in in-situ concrete, joint sealing slots can be readily formed in the following manner:

- before installing, simply cut off the top strip as per the required joint depth, throughout the length. this top strip can be removed later for sealant application. pin the top strip back to Polyboard PE using two-inch nails at regular intervals. then install the joint filler assembly flush with the finished surface.
- prior to sealing, the top strip can then be pulled easily from the joint to provide an uncontaminated sealing slot ready for preparation and sealing. therefore, sealant wastage is reduced.

 as elastomeric sealants will not bond to Polyboard PE, the additional need for bond breaker strips is eliminated.

STORAGE

Store the boards in a cool, dry and shaded area. the boards should be stacked on a pallet which should be placed on a flat area. As the boards are of thermoplastic material, they are easily combustible. therefore, keep it away from sources of heat and protect from flame. Keep away from sharp edges and protect the edges from getting damaged. during installation carry single boards vertically.

HEALTH & SAFETY

Being a thermoplastic material, Polyboard PE will melt and is combustible. Otherwise there is no health hazards associated with Polyboard PE under normal use.

-		_	_		
5	u	Р	P	Ľ	Y

Polyboard PE [1m x 2m] 10,15,20, 25, 30,50mm

TECHNICAL SPECIFIC	ATION	
PROPERTIES	VALUES	TEST STANDARDS
Form	Semi-rigid close cell heat lamine polyethylene sh	ated
Color	Black / white	
Density, [kg/m³]	40/60 [upon request]	ASTM D 1752
Compressive strength @50% compression, [N/mm²]	0.15	ASTM D 1752
Recovery after 50% compression, [%]	>90	ASTM D 1752
Extrusion @50% compression with three		
edges restrained, [mm]	<2	ASTM D 1752
Water absorption	Negligible	ASTM D 545
Resistance to weathering	No desintegration	ASTM G 154
Resistance to chemical and bacteriological attack	Excellent	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polyboard 35

Bitumen impregnated compressible fibre filler board

Excellent recovery with thermal insulation property.

CHARACTERISTICS

- Multi-purpose bituminized softboard made from natural wood fibres for roof, wall and floor in concrete and timber constructions
- ► Excellent recovery after 50% compression
- ► Good thermal insulation properties
- ► Available in various bitumen contents
- ► Easy to install
- Does not Contain Asbestos, Chromated Copper Arsenate and Lead



DESCRIPTION

Polyboard 35 is a compressible bitumen impregnated fibre board for expansion joints. The impregnated softboard is made from natural wood fibres chips and proprietary materials, mechanically reduced to fibres which are then pressed to form a continuous sheet. Bitumen is incorporated into the board during manufacture to improve its moisture resistance and durability.

FIELDS OF APPLICATION

- external wall cladding: filling structural expansion & structural separation joints in block & insitu concrete construction.
- trafficable surfaces: filling expansion joints in motorways, runways, pedestrian areas, bridges, kerbs.
- internal surfaces: filling expansion joints across concrete floors, including screed floors.
- roofs & floor finishes: ideal for filling expansion joints in concrete floors.
- building superstructures: filling expansion joints in basements, retaining walls, site slabs, subways & other water excluding structures.
- reinforced concrete structures: expansion joint fillers in piers and lateral supports like abutments.
- expansion strips: against existing or between adjacent constructions and insets in concrete paving like drains, manholes.
- internal finishes: Various other flat works and concrete floors.



TDS_Polyboard 35_GCC_1021

1

 protection of waterproofing membranes and coatings from mechanical abuse and against backfill.

- protection board for pressure-sensitive layers

SPECIFICATION COMPLIANCE

Wood fibre insulating board produced complies with the pertinent type requirement of ASTM D 1751 (compression, extrusion, recovery and bitumen content). Production standard as per DIN EN 13986 / DIN EN 622-4

INSTALLATION PROCEDURE

When used to form movement joints in in-situ concrete, Polyboard 35 can be positioned next to the shuttering before casting or can be bonded to the adjacent concrete with an appropriate adhesive. The softboard must be protected on external faces by a compatible weather resistant sealant. Polyboard 35 up to a thickness of 19mm can be cut using a stable knife and a guide bar for a straight edge after cutting. To avoid tearing in the reverse face, the cut should be made onto a flat rigid backing material. Boards thicker than 19mm should be cut with a portable electric circular saw.

Protection

Polyboard 35 can be fixed to protect waterproof membrane with a suitable adhesive like Bitubond N or by suitable approved mechanical fixing methods.

STORAGE

Store the boards in a cool, dry and shaded area. The boards should be stacked on a pallet which should be placed on a flat area. Keep away from sharp edges and protect the edges from getting damaged. During installation carry single boards vertically.

HEALTH & SAFETY

There is no health hazards associated with Polyboard 35 in normal use. Polyboard 35 is combustible and will catch fire if exposed to flame or other sources of ignition.

SUPPLY		
Polyboard 35	12mm 19mm 25mm	1220mm x 2200mm

TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARDS		
Density, [kg/m³]	>220	-		
Color	Brown	-		
Surface	Un sanded	-		
Maximum extrusion at 50% compression, [mm]	<1	ASTM D 1751		
Recovery at 50% Compression, [%]	>85%	ASTM D 1751		
Compression at 50%, [psi]	>100	ASTM D 1751		
Brittleness	No crack	ASTM 994		
Bitumen content, [%]	35	ASTM D 545		
All values given are subject to 5-10% tolerance				

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





03 CONCRETE REPAIR SOLUTIONS

INJECTION CHEMICALS

Polyinject Stop

Polyinject Hose PVC

Polyinject EP

Polyinject Rubber

Two-component, fast setting polyurethane injection foam

PVC injection hose system

Two-component epoxy resin for sealing cracks and strengthening structures

Three-component, water-expanding hydrogel

CONCRETE REPAIR

Polycrete ST Polymer modified high strength cementitious repair mortar

Polycrete FC Polymer modified cementitious fairing coat

Polycrete FCX Polymer modified cementitious fairing coat

Polycrete MC High strength free flowing micro-concrete

Polypoxy NF Epoxy repair putty and bedding mortar

GROUTS

Polygrout NS Non-shrink free flow cementitious grout

Polygrout EY 3000(HS) High strength epoxy resin bedding grout and mortar

Polygrout EY 3000(PH) Pile head epoxy resin bedding grout and mortar

Polygrout EY 3000(HF) High flow, high strength epoxy resin grout





03 CONCRETE REPAIR SOLUTIONS

PROTECTIVE COATINGS

Polypoxy PS Polysulphide modified epoxy resin based protective coating

Polypoxy MH Epoxy resin based lining and benching mortar

Polypoxy CT

Bitumen modified epoxy coating

Polypoxy CR Chemical resistant epoxy resin based coating

Polyguard 101 Acrylic aliphatic protective and anti carbonation coating

Polyguard 102S Acrylic aliphatic protective and anti-carbonation coating

Polyguard PU
Two-component UV stable, Polyurethane protective coating

BONDING AGENT

Polybond SBR SBR based bonding agent and admixture

Polybond PVA PVA based bonding agent and admixture

Polybond AC Acrylic based bonding agent

Polybond EP Epoxy primer and bonding agent

SURFACE TREATMENT

Polycure AC

Acrylic based concrete curing compound

Polyrelease Chemical mould release oil

Polyrelease WB Water based mould release agent





Tect Sto

Two component, fast setting polyurethane injection foam

PU injection foam to stop water leakage/flow from concrete and masonry structures

CHARACTERISTICS

- ▶ Multi component
- ► Potlife adjustable with catalyst
- Can be injected with 1-component pumps
- Foam formation





DESCRIPTION

Polyinject Stop is a two component, phthalate-free, water activated fast foaming resin, which is used as a water stop system. The component B serves as a catalyst, in lower dosage it leads to a prolongation of the reaction time. Through contact with water Polyinject Stop reacts very fast to a foam with closed cellular pores and shape-retaining properties. After curing the material does not shrink

FIELDS OF APPLICATION

Polyinject Stop is used as a fast water stop system, in cracks, crevices in construction above and below ground level. Typical applications are tunneling, basement, water tanks and water retaining structures.

APPLICATION INSTRUCTIONS

Surface preparation

If the water flow allows the surface should be stable and free of separating substances. Insufficiently firm layers and concrete slurry must be removed. Especially when applying surface packers and in case that the crack will be sealed, the substrate must be sufficiently prepared.

Work Preparation

Polyinject Stop has to be applied with injection packers. The injection packers may be fixed into holes drilled directly into the crack or drilled diagonally from concrete adjacent to the crack or by the fixing of injection nipples bonded to the surface using Polyquick or Polyquick FS.

For further assistance and instructions regarding the packer fixing and design please refer to our Method Statement.

Injection

Polyinject Stop is a multi-component resin, which is injected into the water-carrying areas with pneumatic, electrical or



TDS Polyinject Stop GCC 0519

hand-operated 1-component pumps. Take care to exclude moisture as much as possible and place the mixed material in an enclosed container after mixing. To decrease the potlife, up to 10% of catalyst can be added and mixed into Polyinject Stop. The mixture of Polyinject Stop and catalyst lasts approx. 8 hours. A skin can form on the liquid surface through reaction with water, which does not influence the processing of the material. Only mix sufficient resin that can be used within the pot life of the material. When flowing water has been stopped, reinject with Polyinject PU+ or any other suitable injection resin out of the Polyinject range to produce a permanent seal. For further information refer to the concerned datasheet permanent seal. For further

CLEANING

Remove packers (if used) once Polyinject Stop is fully cured and make good any holes or voids with Pattex CF1000 or Polypoxy BF and allow to cure. Polyinject Stop, Pattex CF1000 and Polypoxy BF should be removed from tools, equipment and mixers with an appropriate solvent immediately after use. Hardened material can only be removed mechanically.

information refer to the concerned datasheet.

STORAGE & SHELF LIFE

Store all material between 10°C and 25°C in a cool, covered dry place. Do not expose the containers to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. The product is best performing when consumed within 6 months from manufacturing. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should be always be exercised whilst usage. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately and seek medical advice. Should any of the product be accidentally swallowed do not induce vomiting, but call for medical assistance immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and contents details. For any further information please refer to the Material Safety Datasheet.

SUPPLY		
Polyinject Stop	11 kg kit	

TECHNICAL PRORETIES			
PROPERTIES	VALUES		
Consistency	Liquid		
Color	Component-A: brown Component-B: transparent		
Odor	Characteristic		
Density	Approx. 1.2 g/cc		
Processing temperature	5°C - 40°C (component part temperature)		
Form of delivery	50 units per pallet		
Mixing ratio	10:1 by volume and weight parts		
Packaging	Comp. A: 10 kg metal canister Comp. B: 1 kg (catalyst) metal canister		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polyinject Hose

PVC injection hose system

Used to seal joints in concrete against water gress

CHARACTERISTICS

- ► A perfect sealing solution.
- Excellent installation features, fast and easy to install.
- Economical handling due to simple, easy connection of accessory pieces.
- Injection hose is supplied on a handy spool; that allows for uncomplicated cutting to length due to numerical markings printed at every meter along the hose.
- ▶ Low consumption of grouting material due to optimum inner hose diameter.
- Maximum safety features as grouting processes are performed under very low pressures.
- Simple grouting process with multi-injectable capabilities.
- Multiple grouting materials can be processed.
- Ultimate grouting processes performed at 10m 12m intervals between injection points. Overlength injections of up to 30metres can be achieved with special presses and use of correct equipment.
- Highly economical through rapid laying times and rapid injection processes.

DESCRIPTION

Polyinject Hose PVC is a state of art, multi-injection hose system, used to seal joints in concrete against water gress. This injection hose is used to transport grouting materials and then disperse them in to the concrete joint via micro openings along the injection hose. Polyinject Hose PVC is a highly resistant, robust, fully tested, single channel injection hose system that is made of specially developed PVC materials. Its expert design state of art technology is the reason for its high performance, unique processing ability and total functionality. Polyinject Hose PVC has the ability for multi-injectable grouting processes depending upon the grouting material used. This ability allows the system to be re-injectable for the life time of the structure, giving total peace of mind and assurance that the structure can be fully sealed and resealed, if and when required. A great advantage if movement or shrinkage occurs between concrete joint faces of the structure.

FIELDS OF APPLICATION

all areas where construction joint are present and require sealing against water or require a particular joint sealing process



1

- water excluding and water retaining structures
- basement and below ground structures
- tunnels and underground vaults
- water and sewerage treatment plants
- ground and elevated reservoirs and dams
- suspended slabs and roof slabs

GENERAL INFORMATION

Unsealed construction joints can decisively lessen the durability and utility-value of concrete structures. Nowadays, injection hose system are being increasingly used for sealing construction joints in waterproof concrete structure. Their advantages are numerous when compared to traditional Water stop systems. It is not always required to inject the hose but usually only if the joint is leaking, thus, making it a very cost effective procedure. The area of application is usually at the construction joint (other application areas can be applied) where hardened and fresh concrete have have to be joined in such a manner that the sealing effect of the construction joint is fulfilled equally. Simple and rapid installation is achieved at all positions, levels and angles. Polyinject Hose PVC can also be laid where the installation of traditional systems is constructively impossible: for example, on geometrical

complicated surfaces such as sheet piling, diaphragm and contiguous pile walls and old to new construction. Reliable sealing of construction joints , cracks in construction joints and destroyed areas of concrete (gravel pockets and cavities) can be filled via Polyinject Hose PVC. Previously this has been possible to achieve with conventional waterstop systems . Polyinject Hose PVC is used in all types of construction joints and in particular during the construction of water and sewage treatment plants, dams ,barrages, underground garages , in tunnels and the construction of foundations, basements, bridges and power stations.

TECHNICAL FEATURI	ES
Profile	Circular
Outer Diameter	13mm
Inner Diameter	6mm
Length markings every	1 meter
Polyinject hose pvc micro op	pening dimensions
Length Approx	3mm
Distance of openings approx	10mm
Location around hose	4equal positions

Polyinject Hose PVC is equipped with discharge ports (microscopic ports), equally spaced over its entire circumference. This provides Polyinject Hose PVC hose with optimum grouting characteristics. During the injection process, the macroscopic ports open at 1 bar and the injected mater ial is then allowed to perform its task of penetrating all areas of the construction joint that require grouting .As a result, a more secure and longer lasting sealing of the construction joint is achieved. The microports prevent any infiltration of concrete silt and foreign bodies into the injection hose itself. After successful injection, the pressure is released, which causes the microports to close. The injection channel can then be flushed out with water and without the threat of any injection material seeping back into the injection hose or water injection into the joint during the flushing process. The specially designed micro -ports are designed in such a way that they act as valves, allowing the release of materials out of the hose but not back into it.

INJECTION MATERIALS

- Acrylic gel
- P.U resin
- E.P resin
- Ultra fine cement

Note: Only acrylic gel or Ultra fine cement can be used for re-injectable processes.

SYSTEM COMPONENTS

- Polyinject Hose PVC 100 meter roll
- Hose clamp holds hose into position on concrete surface, used in conjunction with impact plug.

- Impact plug securing pin for use with hose clamp.
- Hose coupler/ joiner joins injection Hose or to join reinforced PVC hose.
- Injection pumps, injection resins &injection nipples used to perform the injection process

INSTALLATION PROCEDURES

- 1. Installation of Polyinject Hose PVC is preferably position in the middle of the substrate or if not possible, with a minimum of 100mm concrete cover from any outside edge.
- 2. The Polyinject Hose PVC must lie flat on the 1 st concrete section with the hose clips at 150mm apart. If the concrete surface is rough, then the hose clip spacing need to be closer so the hose is touching the surface of the concrete.
- 3. The standard length of Polyinject Hose PVC, between injection points is approximately 10-12 meter. This will achieve the ultimate injection process.
- 4. At the injection point location where each individual hose length meets, an overlap of 150mm is required and with the two hoses laid parallel to each other at a distance of 30mm apart.
- 5. The injection points are to be installed in such a way as to allow access al all times.
- 6. Over length applications of up to 30 meters are possible but the correct installation procedures and use of Acrylic Gel injection material be used via a 2K Pump. Note: Please refer to the manufacturer's installation

procedures and guidelines (available upon request)

SIMPLE INJECTION PROCESS

- 1. Check the continuation of the hose by flushing with water or with air.
- 2. The hose is injected via the injection point until traces of the injected material are discharged from the Vent end (opposite end of hose). This vent end is closed by means of an injection nipple as soon as the injected Material flows freely (without air pockets) from the vent.
- 3. The flow and extent of the inject ion material in the concrete joint s can be monitored during the injection Process by means of the inject ion pump's pressure gauge if using a 2K pump.
- 4. The injection process is continued until constant pressure has been reached. Constant pressure indicates that the concrete joints are absorbing no more injection material and thus signaling the end of the process.
- 5. Any injection material still within the injection channel is simply flushed out by means of a water pump (2K pump Unit). Minimal pressure is required and it is simple and easy to achieve.
- 6. On completion of the flushing process, the inject ion channel is ready for future reinjections, if required. Hose coupler/joiner joins injection Hose or to join



3

- reinforced PVC hose.
- Injection pumps, injection resins &injection nipples used to perform the injection process

INSTALLATION PROCEDURES

- 1. Installation of Polyinject Hose PVC is preferably position in the middle of the substrate or if not possible, with a minimum of 100mm concrete cover from any outside edge.
- 2. The Polyinject Hose PVC must lie flat on the 1 st concrete section with the hose clips at 150mm apart. If the concrete surface is rough, then the hose clip spacing need to be closer so the hose is touching the surface of
- 3. The standard length of Polyinject Hose PVC, between injection points is approximately 10- 12 meter. This will achieve the ultimate injection process.
- 4. At the injection point location where each individual hose length meets, an overlap of 150mm is required and with the two hoses laid parallel to each other at a distance of 30mm apart.
- 5. The injection points are to be installed in such a way as to allow access al all times.
- 6. Over length applications of up to 30 meters are possible but the correct installation procedures and use of Acrylic Gel injection material be used via a 2K Pump. Note: Please refer to the manufacturer's installation procedures and guidelines (available upon request)

SIMPLE INJECTION PROCESS

- 1. Check the continuation of the hose by flushing with water or with air.
- 2. The hose is injected via the injection point until traces of the injected material are discharged from the Vent end (opposite end of hose). This vent end is closed by means of an injection nipple as soon as the injected Material flows freely (without air pockets) from the vent.
- 3. The flow and extent of the inject ion material in the concrete joint s can be monitored during the injection Process by means of the inject ion pump's pressure

- gauge if using a 2K pump.
- 4. The injection process is continued until constant pressure has been reached. Constant pressure indicates that the concrete joints are absorbing no more injection material and thus signaling the end of the process.
- 5. Any injection material still within the injection channel is simply flushed out by means of a water pump (2K pump Unit). Minimal pressure is required and it is simple and easy to achieve.
- 6. On completion of the flushing process, the inject ion channel is ready for future reinjections, if required. NOTE: Installation and inject ion method processes are available upon request. Fully trained specialist contractors are available to perform the installation and inject ion processes for Polyinject Hose PVC.

WRITTEN SPECIFICATION

Where shown on the drawings, the inject ion hose system shall be Polyinject Hose PVC, multi - injectable, single channel, PVC injection hose with microopening injection ports. The injection hose system must have the ability to be multi - injectable for the life time of the structure and proof of this is to be provided by an independent laboratory test document and be submitted to and accepted by the engineer. All component s of the s y s tem must be original parts supplied from the manufacturer.

HEALTH AND SAFETY

For further information or advice on health and safety precautions, safe handling, storage and correct disposal of products, please refer to the most recent product Material Safety Data Sheet (MSDS), which is available upon request.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed





ect

2-component epoxy resin for sealing cracks and strengthening structures

With specific chemical and physical properties to seal and bond cracks of widths between 0.05 mm and 10 mm.

CHARACTERISTICS

- ► Low viscosity allows penetration into the finest cracks
- ► Suitable for structural repairs
- Excellent bond to concrete, brick and masonry
- Excellent bond also to moist substrates
- ► Minimum creep under sustained load
- Resistant to wide range of chemicals
- ▶ Non-shrink, adheres with no loss of bond
- ► Can be applied pressure less and with pumps





DESCRIPTION

Polyinject EP is a 2-component injection resin on epoxide basis with specific chemical and physical properties to seal and bond cracks of widths between 0.05 mm and 10 mm. Due to its low mixture viscosity Polyinject EP can be applied pressure less as priming resin for concrete renovations or with injection pumps for injections. The particular material basis of Polyinject EP makes application even on slightly moist surfaces possible (see pull-off resistance).

APPLICATION INSTRUCTIONS

Surface preparation

The surface must be stable and free of separating substances. Insufficiently firm layers and concrete slurry must be removed. For this purpose the surface may be prepared by suitable mechanical processes such as e.g. shot blasting, milling or any other suitable mechanical means. Blow the cracks and treated surface with oil free air to ensure complete removal of all dust and loose particles. Ensure that the surfaces are blown dry.

Work preparation

Polyinject EP can be applied pressure less or as injection resin using injection packers. The injection packers may be fixed into holes drilled directly into the crack or drilled diagonally from concrete adjacent to the crack or by the fixing of injection nipples.

For further assistance and instructions regarding the packer fixing and design please refer to our Method Statement.



TDS Polyinject EP GCC 0519

Mixing

Pour the hardener (component B) into the resin (component A) in the indicated mixing ratio and mix with an electrical mixer (max. 300 rpm) until a homogenous mixture is produced. Assure that the B component is evenly dispersed. Mixing must be carried out for at least 3 minutes. Only mix sufficient resin that can be used within the pot life of the material.

Pressure less application

In horizontal areas, wider cracks can be simply filled by pouring in Polyinject EP. To avoid wastage and unnecessary material consumption you may use mastics or tapes to build a kind of reservoir along the cracks and treat the area subsequently with a short-hair lambskin roller.

Application with injection equipment

Polyinject EP can be injected with 1-component or 2-component injection pumps. The injection pressure should be at least 4 bar. After the work is finished the injection resin shall be allowed to cure for 24 hours and shall be left undisturbed for this time.

CLEANING

Remove the packers (if used) once Polyinject EP is fully cured and make good any holes or voids with Polypoxy NF

1

and allow to cure. Polyinject EP and Polypoxy NF should be removed from tools, equipment and mixers with an appropriate solvent immediately after use. Hardened material can only be removed mechanically.

STORAGE & SHELF LIFE

Store the material between 15°C and 35°C in original packing. Do not expose the material to the direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an air conditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as rubber gloves, safety goggles and face mask should be worn when handling the product. Treat any splashes to the skin or eyes with copious amount of fresh water and ask for mdical advice. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

S	U	P	P	L	1

Polyinject EP 10 L

TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARDS		
Compressive Strength, [N/mm²]	>100	ASTM C 579		
Tensile, [N/mm²]	>25	ASTM C 307		
Flexure, [N/mm²]	>50	ASTM C 580		
Pot life, [minutes] @ 25 °C @ 40°C	Approx. 50 Approx. 30	ASTM D 2369		
Absorption 24 hours	0.35	ASTM C 413 Method B		
Specific gravity, [kg/L]	1.05 ± 0.05	ASTM D 1475		
Curing Time, Completely dry Completely cured	6 hours 7 days	-		
Mixture viscosity @25°C, [mPas]	approx. 400	ASTM D 2196		
Working temperature, [°C] (temperature of structural compo	10 - 35 nent)	-		
Ratio of component A : B, [vol %]	4:1	-		
Processing time @ 20°C, [minutes]	Approx. 45	-		
Slant shear bond strength[N/mm²]	>35	ASTM C 882		

All values given are subject to 5-10% tolerance



Polyinject Rubber

Three-component, water-expanding hydrogel

For injection applications for extreme fine cracks which hardens to form a High quality rubber-like, flexible product

CHARACTERISTICS

- ► Flexible
- ► Extreme low viscosity
- ► Can be used for injection hoses



DESCRIPTION

Polyinject Rubber is a three-component, waterexpanding hydrogel on acrylate or methacrylate basis that hardens to a rubber-like, flexible product. Polyinject Rubber can be applied in the case of grout curtains, brickwork injection, horizontal barriers, injection hose grouting and ground stabilization. Polyinject Rubber has an extremely low blending viscosity that is almost equivalent to the viscosity of water. This allows the use of Polyinject Rubber for injection applications for extreme fine cracks and massive walls with thicknesses above 50cm. In cured state Polyinject Rubber has a sound chemical resistance against many acids, bases, solvents and fuels etc. Due to its high-quality material basis (see resistance list). During reaction and in a cured state Polyinject Rubber emits no toxic substances into the groundwater. Product elements that are not built in during the reaction process (monomers, intermediates) are rapidly and completely biodegradable. Differing pot lives can be defined (see table pot life), adapted to the application and environmental temperature, by varying the amount of B component (40 g to 1000 g based on 20 kg A1 components).

APPLICATION INSTRUCTIONS

Surface preparation

The surface must be stable and free of separating substances. Insufficiently firm layers and concrete slurry must be removed. For this purpose the surface may be prepared by suitable mechanical processes such as e.g. shot blasting, milling or any other suitable mechanical means. Blow the cracks and treated surface with oil free air to ensure complete removal of all dust and loose particles. In the presence of running water the flow must be stopped using Polyinject Stop which produces a rapid setting water-stopping foam. When the water is stopped the cracks are re-injected with Polyinject Rubber.



Work preparation

Polyinject Rubber is be applied as injection resin using injection packers and 2-C pumps equipped with a flushing unit. The injection packers may be fixed into holes drilled directly into the crack or drilled diagonally from concrete adjacent to the crack or by the fixing of injection nipples. For further assistance and instructions regarding the packer fixing and design please refer to our method Statement.

Mixing

Polyinject Rubber consists of 3 components. The all container is poured completely into the A1 container and mixed for approx. 3 minutes. The B component is filled in the desired amount into a container equivalent to the A1 component and filled with clean tap water up to the same mass as A1 + A11, then it is mixed again for 3 minutes. The A and B components prepared in this way are ready for use and are processed 1:1 with a 2-component injection pump equipped with a flushing unit. The use of the injection pumps that feature forced conveyance of 1:1 (A to B component) is recommended in order to prevent mixing errors. The A1 component activated with All can be used for approx. 24 hours (depending on temperature). Using the activated A1 component is not recommended after this period. The ready-for-use B component remains stable for approx. 5 hours (depending on

TDS Polyinject Rubber GCC 0519

1

temperature). The required potlife can be defined depending on the amount of B component (salt) and the temperature. The amount of component B should never be below 40 g (based on 20 kg of A1 component) to assure a reliable reaction. Likewise should the amount of component B not exceed 1000 g (based on 20 kg of A1 component) to avoid degradation of the product properties. The amount of component B shall never exceed 300 g (based on 20 kg of A1 component) in case of crack injection on reinforced concrete. Never mix the A1+A11 mixture together with B component.

Injection

Polyinject Rubber can be injected with a 2 component injection pump equipped with a flushing unit.

CLEANING

Residues of Polyinject Rubber can be removed with water from tools, equipment and mixers immediately after use. Hardened material can only be removed mechanically. we do recommend the use of clean potable water for stainless steel pumps as cleaning agent.

STORAGE & SHELF LIFE

Store all material between 10 and 25°C in a cool, covered dry place. Do not expose the containers to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an air-conditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should be always be exercised whilst usage. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately and seek medical advice. Should any of the product be accidentally swallowed do not induce vomiting, but call for medical assistance immediately. Ensure that the container is available for medical attendant to examine any relevant instructions and contents details. For any further information please refer to the material Safety Datasheet.

POT LIFE

A reaction time of 4 to 6 minutes should be defined in the case of grout curtains and ground stabilization to achieve optimal saturation of the ground. It has been proved in extensive tests that faster reaction times have a negative effect as no uniform gel curtain or rather uniform distribution of the injection material can be achieved. The reaction time must be at least 10 min to achieve optimal distribution of the acrylate gel in the case of crack injections, brickwork injections,

subsequent horizontal barriers and injection hose grouting. injection must be carried out in low pressure operation (low pump pressure, utilisation of low-pressure connector) with slow conveyance of the material. In the case of crack injections, crack widths down to a minimum of 0.05 mm can be filled due to the low viscosity of the product.

	40g	150g	300g	600g	1000g	
5°C	41:45	13:20	09:50	06:40	05:00	
10°C	20:30	09:40	07:15	05:30	03:50	
15°C	15:00	07:40	05:50	04:25	03:30	
20°C	11:00	06:30	04:50	04:00	02:45	
25°C	08:50	05:10	04:15	03:25	01:50	

Variation of the B-component with different temperatures (with reference to 20 kg Al comp.)

TECHNICAL SPECIFICATION

ILCHNICAL SPECIFICATION			
VALUE	S		
Al	All	В	
component	component	component	
Liquid	Liquid	Solid	
Transparent	Colorless	White	
Approx. 1.05 g/cm ³	Approx. 0.93 g/cm ³	Approx. 1.1 g/cm ³	
4.7 - 5.3 mPas	1.4 - 1.6 mPas	1.0 mPas (B salt solution)	
A1 28kg, A1	1 1kg, B 1kg		
Mixture of A and B components:			
* 5 - 40°C			
2.46 - 2.66 1	mPas		
2 to 30 minu	tes		
10 to 40 min	utes		
Rubber-elasti	С		
White			
165 %			
20 Vol.%			
	Al component Liquid Transparent Approx. 1.05 g/cm³ 4.7 - 5.3 mPas Al 28kg, Al ponents: * 5 - 40°C 2.46 - 2.66 r 2 to 30 minu 10 to 40 min Rubber-elasti White 165 %	component component Liquid Liquid Transparent Colorless Approx. 1.05 g/cm³ Approx. 0.93 g/cm³ 4.7 - 5.3 1.4 - 1.6 mPas A1 28kg, A11 1kg, B 1kg ponents: * 5 - 40°C 2.46 - 2.66 mPas 2 to 30 minutes 10 to 40 minutes Rubber-elastic White 165 %	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polycrete ST

Polymer modified high strength cementitious repair mortar

Polymer modified repair mortar, specially formulated by blending OPC with non shrinking additives, fibers, polymers and fillers for repairing of beams, columns and slabs.

CHARACTERISTICS

- ► Extra reinforced strength due to the presence of fibres
- ► Shrinkage compensated
- ► Suitable for high build applications
- ► Suitable for use in marine and industrial areas
- ▶ Prevents the corrosion of steel reinforcement in concrete
- ► Can be applied by trowel, pump or spray
- ► High strength repair of concrete
- Does not Contain Asbestos, Chromated copper arsenate and Lead





DESCRIPTION

Polycrete ST is a high strength structural polymer modified repair mortar. The product is specially formulated by blending OPC with non shrinking additives, fibres, polymers and fillers for repairing of beams, columns and slabs in structures which are subjected to dynamic loads and traffic.

FIELDS OF APPLICATION

- specially formulated for columns, slabs and for repair of heavy structural concrete damages
- repair of concrete in highly corrosive environments such as marine structures, sea walls port structures etc.

APPLICATION INSTRUCTIONS

Surface preparation

The surface of the concrete to be repaired should be sound, clean and uncontaminated. The decayed or damaged area should be saw cut, keeping the sides of the area as square as possible. Loose materials must be removed carefully using suitable means such as sharp tools or chipping hammer. If the reinforcement is corroded make sure that the back of the steel is completely exposed. Then clean the steel to bright metal condition.

Priming

a. Reinforcement steel: After cleaning, prime the reinforcement using zinc rich primer (Polyzinc*). Brush apply a continuous coat of Polyzinc to the dry steel. A



TDS_Polycrete ST_GCC_0724

second coat may be applied after 1-2 hours to cover all the pin holes.

b. Concrete: if the concrete damage is severe and is due to chloride attack, a bonding coat with Polybond EP*/ Polybond AC* is advisable before placing Polycrete ST to achieve optimum bond in the fresh and cured sections. To achieve optimum bond between fresh and cured section, Polycrete ST should be applied when the bonding coat is still tacky. For new concrete saturate the area to be repaired thoroughly with water to reach a saturated surface-dry condition prior to the application of the repair mortar.

Mixing

Polycrete ST should be mixed by mechanical means only. Slowly add one bag of Polycrete ST to 3.75 - 4.25 liters of clean gauged water (i.e., w/p ratio of 0.15 - 0.17) while mixing continuously by using a slow-speed mechanical mixer (300-500 rpm) for a minimum of 3 minutes until smooth and lumps-free consistency is achieved.

Placing and finishing

Whilst the primer is still tacky, apply the mortar mix and compact well. Application can be done with trowel or a rubber hand glove to paste the material in place. Polycrete ST can be applied to desired thicknesses in layers on

TDS_Polycre

vertical and overhead surfaces. High build application can be achieved by using a formwork. While applying multiple layers, the previous layer should be crosshatched and allowed to set before applying the next coat. Polycrete ST can be applied to a thickness of 40 mm in one single application if the ambient temperature is less than 25°C and the weather conditions are normal.

Curing

Due to the presence of rapid drying polymers, the repaired area shall be cured in accordance with good concrete curing practice by and protected from drying winds. Curing shall be done by non degradable type of curing compounds or wet hessian cloth. When cured with wet hessian cloth, the area shall be covered immediately with a high density polyethyelene sheet which shall be taped to all edges.

CLEANING

Clean all the tools with water immediately after use. Hardened materials can be removed mechanically only.

YIELD

Polycrete ST

12.89L/25 kg (w/p ratio of 0.16)

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

SUPPLY

Polycrete ST 25kg bag

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

TECHNICAL SPECIFICATION

Typical properties achieved with w/p ratio of 0.16

PROPERTIES	VALUES	TEST STANDARDS
Color & appearance	Grey powder	-
Mixed density, [g/cc]	2.25±0.05	ASTM C D 1475
Application life, [minutes]	30	ASTM C 308
Compressive strength [N/mm²] @ 7 days @ 28 days	≥ 40 ≥ 50	ASTM C579
Flexural strength @28 days, [N/mm²]	> 7	ASTM C 580
Slant shear bond strength @ 28 days [N/mm²]	≥ 4	ASTM C882
Adhesion strength to concrete @ 28 days [N/mm²]	≥ 1.5	ASTM D 4541
Water permeability @ 5 bars	≤ 10 mm	EN 12390-8
Application thickness Minimum, [mm/layer] Vertical, [mm/layer] Overhead, [mm/layer] Horizontal, [mm/layer]	5 up to 40 up to 15 up to 100	
Application temperature, [°C]	5 to 45	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polymer modified cementitious fairing coat

Single component polymer modified fairing coat designed to fill pores, blowholes, minor honeycombs on a concrete surface.

CHARACTERISTICS

- ► Requires only on site addition of water
- ► Shrinkage compensated and crack resistant
- ► Excellent adhesion to concrete
- ► Easy to apply
- ▶ Low permeability. Resistant to the attacks of chlorides and other mild chemicals
- Does not Contain Asbestos, Chromated copper arsenate and Lead







DESCRIPTION

Polycrete FC is a single component polymer modified fairing coat designed to fill pores, blowholes, minor honeycombs on a concrete surface. This can also be used as a skim coat prior to the application of protective coatings. It is a shrinkage compensated crack free material, which can be applied as thin surface coats.

FIELDS OF APPLICATION

- can be used as a skim coat and as an aesthetic mortar
- to repair and fill honeycombs, blowholes on concrete surfaces
- smoothen out damaged patches on concrete surfaces due to shutter movement and grout loss
- as fairing coat prior to the application of protective coatings

APPLICATION INSTRUCTIONS

Surface preparation

Clean the concrete surface of all contaminants like oil and grease, traces of curing compound and loosely adhering particles. The cleaning can be done by sand/grit blasting, high pressure water jet or mechanical scabbling.

Priming

Saturate the concrete surface with clean potable water prior to the application of the fairing coat. However, ensure that the surface is free of standing water prior to the application of the fairing coat.

Polycrete FC shall be mixed with 4.5-5.0L water at a w/p ratio of 0.18 - 0.2. pour the required quantity of water



TDS Polycrete FC GCC 0821

in a separate mixing container. Slowly add the powder to the water and mix continuously with a mortar paddle mixer fitted to a slow speed drill (300/400 rpm) till a homogenous and lump free consistency is achieved.

Application

Apply the mixed mortar with a steel trowel evenly on to the concrete surface within its working time. Allow the coat to partly set before finally toweling it to achieve a smooth finish. For achieving a very smooth finish, sprinkle water on the surface and smoothen the surface with the steel trowel. The fairing coat shall be finished by striking off with a straight edge and closed with a steel or plastic float.

CAUTION:

Water can be drawn to the surface if "overworking" with the float occurs resulting in an unsightly finish. Damp sponges or plastic floats may be used to achieve a desired surface texture, but care should again be taken not to overwork the surface.

Due to the presence of rapid drying polymers in the fairing coat, the applied mortar has to be protected from hot and drying winds. Curing can be done either by the use of a non-degradable type of curing compound or continuous wetting of the surface with water. When cured with wet hessian cloth, the area shall be covered immediately with a

high density polyethyelene sheet which shall be taped to all the edges which has been repaired.

Note: Optimal addition of 1 to 1.5 L Polybond SBR (by reducing the equal volume of water) per 25kg bag Polycrete FC, will increase the cohesion strength of the fairing coat.

YIELD

Polycrete FC 15.65L / 25kg bag (w/p ratio of 0.19)

CLEANING

Clean all tools with water immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Polycrete FC 25kg bag

TECHNICAL SPECIFICATION

Typical properties achieved with 0.19 w/p ratio

PROPERTIES	VALUES	TEST STANDARDS
Color & appearance	Grey powder	-
Mixed density, [g/cc]	1.9±0.05	ASTM D 1475
Application life, [minutes]	30	ASTM C 308
Pull off strength,[N/mm²]	> 1	ASTM D 4541
Water permeability @5 bar pressure, [mm]	<10	BS EN 12390
Application temp, [°C]	5 to 45	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polymer modified cementitious fairing coat

To fill pores, blowholes, minor honeycombs on a concrete surface.

CHARACTERISTICS

- ▶ Requires only on site addition of water, easy to apply
- ► Shrinkage compensated and crack resistant
- ► Excellent adhesion to concrete
- Good resistance to freeze/thaw action
- ▶ Low permeability. Resistant to the attacks of chlorides and other mild chemicals







DESCRIPTION

Polycrete FCX is a single component polymer modified fairing coat designed to fill pores, blowholes, minor honeycombs on a concrete surface. Polycrete FCX consists of fine fillers, which makes the product ideal as a skim coat/ cosmetic repair material for precast panels.

FIELDS OF APPLICATION

- can be used as a skim coat and as an aesthetic mortar
- to repair and fill honeycombs, blowholes on concrete surfaces
- smoothen out damaged patches on concrete surfaces due to shutter movement and grout loss
- as fairing coat prior to the application of protective coatings

APPLICATION INSTRUCTIONS

Surface preparation

Clean the concrete surface of all contaminants like oil and grease, traces of curing compound and loosely adhering particles. The cleaning can be done by sand/grit blasting, high pressure water jet or mechanical scabbling.

Priming

Saturate the concrete surface with clean potable water prior to the application of the fairing coat. However, ensure that the surface is free of standing water prior to the application of the fairing coat.

Mixina

Polycrete FCX shall be mixed with 5.6 to 6.6L water at a w/p ratio of 0.28 to 0.33. Pour the required quantity



of water in a separate mixing container. Slowly add the powder to the water and mix continuously with a mortar paddle mixer fitted to a slow speed drill (300/400 rpm) till a homogenous and lump free consistency is achieved.

Application

Apply the mixed mortar with a steel trowel evenly on to the concrete surface within its working time. Allow the coat to partly set before finally toweling it to achieve a smooth finish. For achieving a very smooth finish, sprinkle water on the surface and smoothen the surface with the steel trowel. The fairing coat shall be finished by striking off with a straight edge and closed with a steel or plastic float.

CAUTION:

Water can be drawn to the surface if "overworking" with the float occurs resulting in an unsightly finish. Damp sponges or plastic floats may be used to achieve a desired surface texture, but care should again be taken not to overwork the surface.

Due to the presence of rapid drying polymers in the fairing coat, the applied mortar has to be protected from hot and drying winds. Curing can be done either by the use of a non-degradable type of curing compound or continuous

TDS Polycrete FCX GCC 1122

wetting of the surface with water. When cured with wet hessian cloth, the area shall be covered immediately with a high density polyethyelene sheet which shall be taped to all the edges which has been repaired.

Note: Optimal addition of 0.8 to 1.2L Polybond SBR (by reducing the equal volume of water) per 20kg bag Polycrete FCX, will increase the cohesion strength of the fairing coat.

YIELD

Polycrete FCX 14.7L/20kg bag (w/p ratio of 0.305)

CLEANING

Clean all tools with water immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Polycrete FCX 20kg bag

TECHNICAL SPECIFICATION

Typical properties achieved with 0.28 to 0.33 w/p ratio **TEST STANDARDS PROPERTIES VALUES** Color & appearance Grey powder Mixed density, [g/cc] 1.77±0.05 ASTM D 1475 Application life, [mins] 30 BS EN 196 Pull off strength , [N/mm²] ASTM D 4541 BS 1881 Application temp, [°C] 5 to 45

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

2



Olycrete M

High strength free flowing micro-concrete

Suitable to repair large volume of concrete repairs at thicknesses from 10mm to 250mm.

CHARACTERISTICS

- ▶ Rapid strength development and high ultimate strength
- ► Shrinkage compensated
- ► Minimal drying shrinkage
- ▶ Low alkali content minimizes the danger of alkali silica
- ► Self-compacting /no honeycombing as air is displaced without need for vibration
- ▶ Does not Contain Asbestos, Chromated copper arsenate and Lead





DESCRIPTION

Polycrete MC is a high strength, shrinkage compensated, free flowing micro-concrete. The material is a blend of portland cement, graded aggregates, special fillers and additives. When mixed with clean water, a free flowing product is produced ideally suited to repair large volume of concrete repairs at thicknesses from 10mm to 250mm.

FIELDS OF APPLICATION

- large volume or area repairs where the use of hand or trowel applied mortars is impractical
- it can be applied for large volume repairs in excess of 10 mm. The product can be applied in sections generally up to 250 mm
- in repair areas with restricted access or high concentration of reinforcement
- due to the plastic nature of the product, it can be used as grout and poured under a head of pressure
- pile head re-profiling and general void filling

APPLICATION INSTRUCTIONS

Surface preparation

Concrete substrate to be repaired should be sound, clean, and uncontaminated. The formwork should be rigid and tight to prevent loss of grout and have properly sealed faces to ensure that no water is absorbed from the repair material. Saw cut the extremities of the repair locations to a depth of at least 10 mm to avoid feather edging and to



TDS Polycrete MC GCC 0922

provide a square edge. Clean any corroded rebar by grit blasting or vigorous wire brushing. Any rebar that has lost more than 25% of its original diameter should be cut out and replaced. Prime reinforcement with Polyzinc*, zinc rich primer.

Primina

Not required, pre-wet substrate and remove any contaminats and standing water before placing the grout.

One bag (25 kg) of Polycrete MC requires 3.0 - 3.5 liters of clean potable water. In hot climates, the use of cold water (< 25°C) is recommended. Mix in a suitable size drum using an approved grout paddle at a slow speed (300/400 rpm) with a heavy-duty drill. Pour required amount of water in the mixing vessel followed by Polycrete MC. Mix for 3 minutes to get a homogeneous and consistent mix.

Placing

The mixed material should be placed within 30 minutes. It can be poured or pumped in to the repair area to fill the cavity at the required level. No vibration is required. After concrete has initially set, the surface may be finished to the desired texture.

Curing

Due to the presence of rapid drying polymers, the repaired

Quality for Professionals

area shall be cured in accordance with good concrete curing practice. curing shall be done by non degradable type of curing compound or wet hessian cloth. When cured with wet hessian cloth, the area shall be covered immediately with a high density polyethyelene sheet which shall be taped to all edges.

PRECAUTIONS

- not recommended to be used at temperature under 5°C
- do not mix part bags
- ponding method of curing is not suitable

YIELD	
--------------	--

Polycrete MC 12.3 liter/ 25 kg bag @ 0.13 w/p ratio

STORAGE & SHELF LIFE

The material shall be stroed in a cool, dry and shaded area. In tropical areas the material shall be stored in an air-conditioned environment. Shelf life up to 12 months in un-opened containers. Exposure to excessive heat and humidity will affect the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce

vomiting, but call for medical assistance immediately.

SUPPLY

Polycrete MC 25kg bag

TECHNICAL SPECIFICATION

Typical properties achieved with w/p ratio of 0.13

/ 1 1 1	′ 1	
PROPERTIES	VALUES	TEST STANDARDS
Color & appearance	Grey powder	-
Mixed density, [g/cc]	2.3±0.05	ASTM D 1475
Application life, [minutes]	30	BS EN 196
Compressive strength [N/mm²]		ASTM C579
@ 7 days	≥ 55	
@ 28 days	≥ 70	
Tensile strength @		
28 days, [N/mm²]	>5	ASTM C 307
Flexural strength		
@ 28 days, [N/mm²]	>9	ASTM C 580
Height change (expansion) [%]	up to +0.75	ASTM C940
Water permeability @ 5 bars	≤ 10 mm	EN 12390-8
Application thickness,	minimum maximum	1
[mm/pour]	10 250	-
Application temperature,[°C]	5 to 45	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polypoxy NF

Epoxy repair putty and bedding mortar

Used for bedding, gap filling, repair and adhesive applications.



CHARACTERISTICS

- ► Easy to use, non slumping
- ► Good impact resistance
- ► Resistant to acids, alkalis, oil, grease, hydrocarbon fuels and saline water
- ▶ No primer or bonding agent required
- ► High compressive strength
- ► Can be trowelled to smooth finish
- Does not Contain Asbestos, Chromated copper arsenate and Lead





DESCRIPTION

Polypoxy NF is an easy to use non-flowing, sand filled two component epoxy compound which can be used for bedding, gap filling, repair and adhesive applications.

FIELDS OF APPLICATION

- as concrete repair: repairing damaged concrete, filling of cracks
- as a skim coat/filler on prepared floors prior to application of floor coatings and screeds
- as jointing compound: can be used to join pre cast concrete / GRC structures.
- as a bedding material: can be used for fixing tiles on heavy duty areas, bedding bridge beams or bridge bearing.
- excellent for anchoring bolts or replacement rebar and filling bolt pockets.
- as a bonding agent: it bonds to almost all rigid surfaces.
- as a mould: it can be molded to any shape.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface preparation

Clean all the surfaces and remove any loose particles, laitance, dust, oil, grease, paint etc. Abrade the bond area to improve mechanical bond.



TDS_Polypoxy NF_GCC_0322

1

Mixing

Polypoxy NF part A and part B shall be mixed thoroughly using a trowel or gloved hand until a uniform color and consistency is achieved. For small mixes, ensure that both the parts are mixed as per the ratio of 60:40 (A:B).

Application

Application can be carried out by putty knife, trowel or wooden float. Press firmly to ensure proper adhesion and full contact. Additional build up can be done by multiple layer application. Thickness can be from 0mm - 5mm. The application of additional layers should follow between 8 - 24 hours after the first application.

CLEANING

Clean all the tools with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

Quality for Professionals

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

COVERAGE

3 kg kit will cover 1.67 m² at 1mm thickness.

SUPPLY

Polypoxy NF 3kg kit

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

TECHNICAL SPE	CIFICATION	
PROPERTIES	VALUES	TEST STANDARDS
Color & appearance	Grey/off white paste	-
Density, [g/cc]	1.85±0.05	ASTM D 1475
Application life, [minutes]	45	-
Compressive strength @7days, [N/mm²]	>60	ASTM C 579
Flexural strength @7days, [N/mm²]	>30	ASTM C 580
Tensile strength @7 days, [N/mm²]	>12	ASTM C 307
Shear bond strength @7 days, [N/mm²]	>40	ASTM C 882
Application thickness, [mm/layer]	0 to 5	-
Application temperature, [°C]	5 to 35	-
Service temperature, [°C]	-5 to 70	-
Initial cure, [hours]	Approx. 8	-
Final cure, [days]	7	-

All values given are subject to 5-10% tolerance





Non-shrink free flow cementitious grout

shrinkage compensated grout of excellent workability and performance.

CHARACTERISTICS

- ► Free flowing
- ► Shrinkage compensated
- Premixed and properly packed to avoid site variation
- ▶ Excellent bond strength to concrete and steel
- ► Adjustable consistency
- ▶ Impact resistant.
- ▶ Non shrink property of the grout provides maximum contact with bearing surface
- ▶ Can be used up to 80mm thickness between plate and foundation
- It is watertight and withstands chemically aggressive
- Does not Contain Asbestos, Chromated copper arsenate and Lead



DESCRIPTION

Polygrout NS is a cementitious non shrink grout which when mixed with water gives a free flowing shrinkage compensated grout of excellent workability and performance. Polygrout NS is a blend of selected cement, graded fillers and chemical additives. These special additives imparts controlled expansion in plastic state simultaneously minimize water requirement.

FIELDS OF APPLICATION

Base plate grouting of:

- machinery and equipment foundations
- repair of pre-cast concrete
- for anchoring of bolts, dowels etc
- sealing of tie rod holes

APPLICATION INSTRUCTIONS

Surface preparation

The surface should be clean, free of dust, demolding agents, oil, paint etc. Saturate the area to be grouted with water at least 24 hours prior to grouting. The surface



TDS_Polygrout NS_GCC_0922

1

should be damp, but strictly free of standing water. Whenever form work or shutter is used, make sure that all the joints are sealed properly to avoid grout loss.

Mixing

Mixing should be done using a drill fitted with a mixing paddle or a grout mixer. Add 2.75 - 3.25 litres of clean cool water in a container. Add Polygrout NS slowly and mix continuously for a minimum of 5 minutes to obtain a smooth, uniform lump free consistency.

Note

Unopened bags are to be kept in a shaded area water used for mixing should be below 25°C, particularly in high ambient temperature conditions.

Placing

Grouting should be done continuously. Therefore make sure that sufficient grout is prepared before starting. While filling voids, grout should be poured from one end to avoid air pockets. the following measures shall be taken while placing the grout:

- grouting operations should be preferably carried out in a shaded condition.
- avoid grouting at the hottest time of the day.
- place the grout within 15 minutes of mixing to obtain best results

 Grouting should not be done in free & unrestrained areas as the gaseous expansion of the grout will lead to development of cracks.

Polygrout NS can be poured from minimum 10mm up to 80mm in one single pour. However, for depths greater than 80mm, it is recommended to add well graded aggregates of 5 to 8mm (up to 50%) to the grout in order to reduce the heat generated during the exothermic reaction when the grout is mixed and poured for larger depths. Cover the exposed areas immediately after placing with a polythene sheet, to protect from drying winds.

YIELD

Polygrout NS: 12.11./25kg bag (w/p ratio of 0.12)

CURING

Upon achieving its final set, proper curing with water or curing compound shall be done.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Polygrout NS 25kg bag

TECHNICAL SPECIFICATION

Typical properties achieved with 0.12 w/p ratio

Typical properties actileved	WIIII 0.12 W/P	Tallo
PROPERTIES	VALUES	TEST STANDARDS
Colour & appearance	Grey powder	-
Mixed density [g/cm³]	2.30 ± 0.05	ASTM D1475
Initial setting, [hours]	4	-
Final setting, [hours]	10	-
Compressive strength [N/mm²]		ASTM C579
@ 1 day	≥ 20	
@ 7 days	≥ 50	
@ 28 days	≥ 60	
Tensile strength,		
@ 28 days, [N/mm²]	>2	ASTM C 307
Flexural strength,		
@ 28 days, [N/mm²]	>6	ASTM C 580
Shear bond to concrete		
@28 days, [N/mm²]	>3.5	BS 6319
Height change (expansion), [%]	up to +0.5	ASTM C940
Water permeability		
@ 5 bar pressure	<10 mm	BS EN 12390-8
Flow		ASTM C1437
Initial [mm]	≥ 220	
After 15 minutes [mm]	≥ 200	
Application temperature, [°C]	5-45	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





ygrout EY 30

High strength epoxy resin bedding grout and mortar

For grouting of machine base plate foundations, anchor bolts.

CHARACTERISTICS

- ► High compressive strength
- ► Resistant to high temperature
- ► Excellent chemical resistance
- ► Excellent impact and abrasion resistance
- ► Early strength development
- ► Adjustable consistency, excellent workability
- ▶ Non shrink







DESCRIPTION

Polygrout EY 3000 (HS) is a free flowing non shrink solvent free epoxy resin based grout. Polygrout EY 3000 (HS) is a combination of high performance epoxy resins, specially graded aggregates and additives to provide excellent mechanical properties. Polygrout EY 3000 (HS) is used for grouting of machine base plate foundations, anchor bolts.

FIELDS OF APPLICATION

- machine base plate grouting
- bridge bearing pads
- anchoring of crane rails, towers and dock sills
- anchoring of bolts and rebars from 15mm 60mm diameter in concrete, brick work, masonry and rock
- installation of reinforced concrete starter bars, foundation bolts and railway tracks
- pile head encapsulation to ensure water tightness

APPLICATION INSTRUCTIONS

Surface preparation

Surfaces shall be structurally sound and clean of all contaminants like mould release agent, curing compound, grease, paint and cement laitance. The area shall be dry and free of standing water. Surface cleaning by grit/captive blasting or wire brushing is recommended depending on the degree of contamination. A watertight shutter shall be erected all around the area where Polygrout EY 3000 (HS) shall be poured. Any gaps or openings below the formwork or on joints shall be sealed with a suitable mastic sealant or a rubber seal.



Caution: Resin leakage from the grout will result in segregation. The formwork shall be coated with a heavy duty mould release oil to ensure easy deshuttering.

Mixing

Mix part a and part b separately for a minute using a slow speed drill (300 - 400 rpm) fitted to a suitable paddle mixer. Then add part b into part a and mix thoroughly for 1-2 minutes. Add part C aggregates slowly into the mix and further mix for another for 3-4 minutes till a uniform and homogenous consistency is achieved.

Note: All parts are pre-weighed and no part mixing is allowed.

Placing

Pour the mixed Polygrout EY 3000 (HS) immediately after mixing and within the pot life. The grout shall be poured continuously from one corner or end to avoid entrapment of air. The material is self compacting, so no additional vibration is required. For congested areas it is recommended to lightly tamp the shutters with a rubber mallet to remove the entrapped air.

Note: The grout which has exceeded its pot life shall not be used and be discarded immediately.

TDS Polygrout EY 3000(HS) GCC 0724

CLEANING

All tools shall be cleaned with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store the material in a dry, cool and shaded condition. in tropical climates the product must be stored in an air conditioned environment. The shelf life of the product is up to 12 months when stored as per recommendation. Excessive exposure to heat, UV and sunlight will result in the deterioration of the quality of the product and reduce its shelf life

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

Polygrout EY 3000(HS)	15L kit	wt 30kg #
/ 3 = (/		

Approximate weight

TECHNICAL SPECIF	ICATION	
PROPERTIES	VALUES	TEST STANDARDS
Color	Dark grey	-
Mixed density, [g/cc]	2.1±0.05	ASTM D 1475
Application life, [minutes]	60	-
Compressive strength @24 hours, [N/mm²]	>65	ASTM C 579
@7days, [N/mm²]	>95	ASTM C 579
Flexural strength@7days, [N/mm²]	>25	ASTM C 580
Tensile strength @7 days, [N/mm²]	>12	ASTM C 307
Adhesion strength @7 days, [N/mm²]	>3.5	BS 1881 ASTM D 4541
RCP	Nil	ASTMC 1202
Hydrostatic water pressure @5 bar, [50m]	no leakage	BS EN 12390
Chemical resistance	ph 2.5 to 11.5, sea water, hydrocarbon fuels,	-
Application thickness, [mm] [mm/pour]	10 (min) 80 (max)	-
Application temperature, [°C]	5 to 35	-
Service temperature, [°C]	5 to 70	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





grout EY 300

Pile head epoxy resin bedding grout and mortar

High performance epoxy resins, specially graded aggregates and additives provides excellent mechanical properties.

CHARACTERISTICS

- ► High compressive strength
- ► Resistant to high temperature
- ► Excellent chemical resistance
- ► Excellent impact and abrasion resistance
- ► Early strength development
- ► Compatible with bitumen based waterproofing membranes and coatings
- ▶ Polyproof Ultra FBS components prior to bitumen based waterproofing membranes and coatings





DESCRIPTION

Polygrout EY 3000 (PH) is a three component solvent free epoxy resin based bedding grout and mortar used for pile head encapsulation. It is a combination of high performance epoxy resins, specially graded aggregates and additives to provide excellent mechanical properties. Polygrout EY 3000 (PH) fully bonds with the pile head and forms a watertight system by preventing any seepage from cracks and capillaries in the pile head.

FIELDS OF APPLICATION

- pile head encapsulation to ensure water tightness
- bridge bearing pads
- anchoring of crane rails, towers and dock sills
- anchoring of bolts and rebars from 15mm 60mm diameter in concrete, brick work, masonry and rock
- installation of reinforced concrete starter bars, foundation bolts and railway tracks

APPLICATION INSTRUCTIONS

Surface preparation

Surfaces shall be structurally sound and clean of all contaminants like mould release agent, curing compound, grease, paint and cement laitance. The area shall be dry and free of standing water. Surface cleaning by grit/captive blasting or wire brushing is recommended depending on



TDS_Polygrout EY 3000(PH)_GCC_1224

the degree of contamination. A watertight shutter shall be erected all around the area where Polygrout EY 3000 (PH) shall be poured. Any gaps or openings below the formwork or on joints shall be sealed with a suitable mastic sealant or a rubber seal.

CAUTION: Resin leakage from the grout will result in segregation. The formwork shall be coated with a heavy duty mould release oil to ensure easy deshuttering.

Mix part a and part b separately for a minute using a slow speed drill (300 - 400 rpm) fitted to a suitable paddle mixer. Then add part b into part a and mix thoroughly for 1-2 minutes. Add part C aggregates slowly into the mix and further mix for another for 3-4 minutes till a uniform and homogenous consistency is achieved.

Note: All parts are pre-weighed and no part mixing is allowed.

Placing

Pour the mixed Polygrout EY 3000 (PH) immediately after mixing and within the pot life. The grout shall be poured continuously from one corner or side to avoid entrapment of air. Spread the poured grout evenly with a steel trowel. for congested areas it is recommended to lightly tamp the

shutters with a rubber mallet to remove the entrapped air. **Note:** The grout which has exceeded its pot life shall not be used and be discarded immediately.

CLEANING

All tools shall be cleaned with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store the material in a dry, cool and shaded condition. in tropical climates the product must be stored in an airconditioned environment. The shelf life of the product is up to 12 months when stored as per recommendation. Excessive exposure to heat, UV and sunlight will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY			
Polygrout EY 3000(PH)	15L kit	wt 32kg#	
# Approximate weight			

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Color	Dark grey	-
Mixed density, [g/cc]	2.18±0.05	ASTM D 1475
Pot life, [minutes]	60	-
Compressive strength @7days, [N/mm²]	>70	ASTM C 579
Flexural strength@7days, [N/mm²]	>20	ASTM C 580
Tensile strength @7 days, [N/mm²]	>10	ASTM C 307
Adhesion strength @7 days, [N/mm²]	>2.5	BS 1881 ASTM D 4541
RCP	Nil	ASTM C 1202
Water permeability @5 bar	Nil	BS EN 12390
Chemical resistance	pH 2.5 to 11.5, see water, hydrocarbon fuels,	
Application thickness, [mm] [mm/pour]	10 [min] 80 [max]	_

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





EY 30

High flow, high strength epoxy resin grout

withstand heavy static and dynamic loads in a wide variety of applications. Suitable for an application thickness upto 300mm.

CHARACTERISTICS

- ► Excellent flow characteristics.
- ► Excellent chemical resistance
- ► High tensile, flexural and compressive strength
- ► Early strength development.
- ► Excellent adhesion to steel and concrete.
- ► High resistance to dynamic loads
- ▶ Non-shrink and tolerant of damp surfaces.
- ► Adjustable consistency, excellent workability
- ▶ No priming required.
- ► Long pot-life.







DESCRIPTION

Polygrout EY 3000 (HF) is a free flowing non shrink solvent free low exothermic epoxy resin based grout. Polygrout EY 3000 (HF) is a combination of high performance epoxy resins, specially graded aggregates and additives withstand heavy static and dynamic loads in a wide variety of applications. Polygrout EY 3000 (HF) is suitable for an application thickness upto 300mm.

FIELDS OF APPLICATION

- machine base plate
- bridge bearing pads
- anchoring of crane rails, towers and dock sills
- anchoring of bolts and rebars in concrete, brick work, masonry and rock
- installation of reinforced concrete starter bars,
- foundation bolts and railway tracks
- all applications under conditions of high ambient temperature

APPLICATION INSTRUCTIONS

Surface preparation

Surfaces shall be structurally sound and clean of all contaminants like mould release agent, curing compound, grease, paint and cement laitance. The area shall be dry



TDS Polygrout EY 3000(HF) GCC 0519

and free of standing water. Surface cleaning by grit/captive blasting or wire brushing is recommended depending on the degree of contamination. A watertight shutter shall be erected all around the area where Polygrout EY 3000 (HF) shall be poured. Any gaps or openings below the formwork or on joints shall be sealed with a suitable mastic sealant or a rubber seal.

Caution: Resin leakage from the grout will result in segregation. The formwork shall be coated with a heavy duty mould release oil to ensure easy deshuttering.

Mix Part A and Part B separately for a minute using a slow speed drill (3 00 - 400 rpm) fitted to a suitable paddle mixer. Then add part B into part A and mix t ho roughly for 1-2 m inutes. Add part C aggregates slowly into the mix and further mix for another for 3-4 minutes till a uniform and homogenous consistency is achieved.

Note: All parts are pre-w eighed and no part mixing is allowed.

Placing

Pour the mixed Polygrout EY 3000 (HF) immediately after mixing and within the pot life. The grout s hall be poured continuously from one corner or end to a void

2

entrapment of air. The material is self compacting, so no additional vibration is required. For congested are as it is recommended to lightly tamp the shutters with a rubber mallet to remove the entrapped air.

NOTE: The grout which has exceeded its pot life shall not be used and be discarded immediately.

CLEANING

All tools shall be clean ed with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store the material in a dry, cool and shaded condition. In tropical climates the product must be stored in an air conditioned environment. The shelf life of the product is up to 12 months when stored as per recommendation. Excessive exposure to heat, UV and sunlight will result in the deterioration of the quality of the product and reduce its shelf life

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles shall be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

DISPOSAL

All disposal practices must be in compliance with all local laws and regulations.

SUPPLY		
Polygrout EY 3000 (HF)	15L kit	wt 30 kg #

Approximate weight

TECHNICAL SPECIF	ICATION	
PROPERTIES	VALUES	TEST STANDARDS
Color	Dark grey	
Density	2.08±0.05	
Pot life, [minutes]	60	
Compressive strength @7days, [N/mm²]	≥90	ASTM C 579
Flexural strength @7days, [N/mm²]	≥30	ASTM C 580
Tensile strength @7 days, [N/mm²]	≥15	ASTM C 307
Adhesion strength @7 days, [N/mm²]	≥3	BS 1881 ASTM D 4541
Hydrostatic water pressure @5 bar [50m]	No leakage	BS EN 12390
Chemical resistance	pH 2.5 to 11.5 sea water, hydrocarbon fuels	ASTM D 543
Application thickness, [mm]	10 [Min] 300 [Max]	
Application temperature, [°C]	5 to 35	
Service temperature, [°C]	5 to 70	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $+23^{\circ}\text{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



www.henkelpolybit.com



Polysulphide modified epoxy resin based protective coating

Designed for superior adhesion, corrosion protection and high chemical resistance for concrete and steel structures.

CHARACTERISTICS

- ▶ Enhanced adhesion to many substrates including rusted and damp surfaces
- ► Good corrosion protection
- ► Good impact resistance
- ► Chemical resistance to a wide variety of fluids in particular to those used in the automotive and aerospace industries
- ▶ Thermal shock resistance. Good electrical properties and controlled acoustic dampning characteristics
- Very low permeability to water and vapor
- Non-Toxic
- ► Good UV resistance
- ► Good Flexibility and crack bridging ability
- ► Easy to apply
- ► Suitable for use in contact with TSE water
- ► Can be used with glass fiber reinforcement to provide a tough, UV stable, abrasion and chemicallly resistant lamination system.







DESCRIPTION

Polypoxy PS is a polysulphide modified epoxy resin protective coating designed for superior adhesion, corrosion protection and high chemical resistance for concrete and steel structures. It is a two part system which can be applied up to 1mm thickness to provide a flexible, elastomeric, crack bridging, water and chemical resistant coating.

FIELDS OF APPLICATION

- industrial corrosion protection of steel and concrete structures
- hard wearing floor coating in industrial areas
- water proofing of potable water structure
- protective coating to exposed concrete structures
- waterproofing & protection of swimming pools, water tanks etc



TDS_Polypoxy PS_GCC_0821

- corrosion protection of steel and concrete in sweet and salt water atmosphere as well as protection against chemical and carbonation attacks
- internal lining of manholes & treaded sewage holding tanks
- sea water resistance

SPECIALTY

Polypoxy PS has the quality & chemical resistance of epoxy plus the flexibility and adhesion properties of polysulphide

APPLICATION INSTRUCTIONS

Surface preparation

The surface should be free from dust, dirt, curing compound, oil etc. Clean the surface thoroughly to remove all loosely adhering particles and cement laitance. It is recommended to use a light mechanical grinder for cleaning. The concrete should be sound and any cracks, pot holes shall be repaired with Polypoxy BF or Polypoxy NF.

Priming

Prime the prepared surface with Polyprime EP @ 4-5m²/L. the coating is applied when the primer is in a tacky to semi-tacky condition. However, in all circumstances, the

1

coating shall be applied within 12 hours of application of the primer. If the primer surface is left open for more than 12 hours, then a fresh coat of primer has to be re-applied. For damp, corroded & contaminated surfaces Polyprime R* is recommended to be used. Priming is not required for steel surfaces.

Mixing

Mix part A (resin) and part B (hardener) separately for a minute using a slow speed drill fitted with a paddle to remove any sediment. Then add part B into the part A pail and mix thoroughly for 2-3 minutes to achieve a uniform consistency. apply immediately after mixing within its pot life.

Application

Apply the coating with a brush, roller or airless spray (nozzle size 0.4-0.6 mm @2500 psi pressure). On vertical surfaces apply the coating at a wet film thickness of 250 microns in a single coat. Since the coating is heavy bodied, dripping may be observed if it is applied at a higher thickness. Additional coats can be applied only when the previous coat dries off completely (8-10 hours). After application the coating must be back rolled to reduce surface irregularities and to improve bonding. Care should be taken to ensure that a continuous film is achieved.

Note:

- The coating can be applied as a flexible and crack free flooring with an anti slip finish. Graded sand/quartz can be broadcasted on the first coat while it is still wet and allowed to dry completely. After a period of 24 hours, the excess sand/quartz can be brushed away and the second coat is to be given.
- lamination system is built with approx. 300 Gsm glass fibre fabric. The system shall be made with primer coat and two layer of coating - both embeded with glass fiber and sealed with a final layer of seal coat.

CLEANING

Clean all equipments with a Polysolvent. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store under cover, out of direct sunlight and protect from extreme temperatures. In tropical climates the produce must be stored in air - conditioned environment. Shelf life is up to 12 months when stored as per recommendations. Excessive exposure to heat and high humidity will result in the deterioration of the product and reduce its shelf life considerably.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polypoxy PS	4L & 20L kit
Polyprime EP	5L & 15L kit
Polyprimer	5L kit
Polypoxy BF	3kg kit
Polypoxy NF	3kg kit
Polysolvent	5L & 20L pails

TECHNICAL SPECI	IFICATION	
PROPERTIES	VALUES	TEST STANDARDS
Chemical type	Polysulphide modified epoxy resin	-
Mixed density, [g/cc]	1.45±0.05	ASTM D 1475
Color	Grey [other colors upon request]	
Application life, [minutes]	60	ASTM D 2471
Adhesion strength, [N/mm²]	≥2	ASTM D 4541
Curing time	Tack free fullcure 6-8 hours 7 days	
Re-coating, [hours]	10-12	
Coverage	2.0 m ² /L for 500 m	nicrons DFT
Chemical resistance	Dilute acids and alkalis, solvents, oil, petrol, effluents sea water etc.	·, -
Water potability	Passes	BS 6920
UV resistance @100, [hours]	Passes	-
Application temperature, [°C]	5 to 35	-
Service temperature, [°C]	5 to 70	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Epoxy resin based lining and benching mortar

for protection of concrete.



CHARACTERISTICS

- ▶ Highly resistant to a wide range of chemicals, acids and alkalis
- ► High impact and abrasion resistance
- ► Can be used in both dry and damp conditions
- ▶ Is thixotropic, hence can be applied vertically up to 10mm in a single application, a higher build up thickness may be applied in the second coat
- ► High humidity does not affect curing
- ► Shrinkage free hardening
- ► Increased water impermeability
- ▶ Odourless, can be used in enclosed applications
- ▶ Non-toxic, can be used in contact with potable water
- ► Easy to use pre-weighed packs, requires only on site







DESCRIPTION

Polypoxy MH is a three-component solvent free, thixotropic lining and benching mortar for protection of concrete. Polypoxy MH is based on a blend of epoxy resins and selected quartz aggregates. The cured render exhibits very high impact and chemical resistance.

FIELDS OF APPLICATION

- as a chemical resistant internal lining & benching mortar for concrete structures such as manholes, treated sewerage tanks and drainage canals, etc.
- as repair mortar for concrete joints, edges and soffits
- as repair and bonding mortar on stone, bricks, concrete pre-cast blocks, steel, etc.
- as an abrasion and impact resistant wearing course

APPLICATION INSTRUCTIONS

Surface preparation

The concrete surface should thoroughly be cleaned of all loosely adhering particles. Water jet blasting, sand or grit blasting is recommended for proper cleaning and removal



TDS Polypoxy MH GCC 0519

1

of all deleterious materials. Traces of oil grease or curing compound is to be removed. Cracks and pot holes shall be repaired with a suitable repair mortar. Water leakages if any are to be plugged with a quick setting mortar.

Priming

All surfaces shall be primed with Polyprime EP (epoxy primer). The primer is to be properly applied on all the irregular surfaces on the concrete. On highly absorbent surfaces a second coat of primer is to be given. The epoxy render shall be applied when the primer coat is still tacky. Depending on the ambient temperature if the primer dries off fast, another coat shall be given prior to the application of the epoxy mortar. The pot life of the primer is about 30 minutes to 3 hours depending on the temperature. It is recommended to mix the primer for that area only on which it can be applied, the coverage rate is around 3-5 m²/L depending on the porosity of the substrate.

Mixina

Pour the entire contents of part B (hardener) into part A (base) and mix thoroughly for a few minutes with a paddle mixer fitted to a slow speed drill to get a homogenous mix. Then add the part C (powder) slowly into the mixed resins container and further mixed continuously till a uniform consistency is achieved. As the products are supplied in

pre-weighed packs, part mixing is not at all recommended, since the cured product will not achieve its full properties even if there is a small variation in the mixing proportions.

Application

Apply the mixed mortar immediately after mixing on the tacky primed surface firmly with a steel trowel or spatula. For vertical and overhead surfaces the mortar is to be applied at a maximum thickness of 10mm to avoid sagging. However, for additional build ups, the epoxy mortar can be applied at thicknesses up to 30mm in the second layer. The second layer of application is to be done only after the first coat has achieved its initial cure i.e., after 24 hours of application. If a further layer is to be applied then the surface shall be cross hatched to get the mechanical key when the render is still wet. Further priming is required if the second layer is to be applied after a period of 36 hours of application of the first layer.

CURING

The applied material will achieve its full properties after 7 days of application.

CLEANING

Clean all tools with Polysolvent immediately after use. hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Polypoxy MH resin components A & B should be stored in an air-conditioned location at below 25°C. Filler component can be stored under cover in shaded area. the shelf life is 12 months in unopened conditions if stored as per recommendations.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

COVERAGE

Polypoxy MH	2kg/m²/mm thickness
Polyprime EP	3-5 m2/L

CHEMICAL RESISTANT	CE
HCL [20%]	Excellent
Tartaric acid [10%]	Excellent
Sodium hydroxide, [50%]	Excellent
Sulphuric acid, [10%]	Very good
Diesel/petrol	Excellent
Lactic acid [10%]	Very good

Very good

Very good

CHEMICAL DECICTABLE

Hydrocarbon [100%]

Nitric acid [20%]

IFICATION	
VALUES	TEST STANDARDS
2.0±0.05 (mixed mortar)	-
> 60	-
> 60	ASTM C 579
>15	ASTM C 580
>15	ASTM C 307
> 30	ASTM C 882
< 0.1	ASTM C 413
24	
7	
5 to 35	
5 to 70	
	VALUES 2.0±0.05 (mixed mortar) > 60 > 60 > 15 > 15 > 30 < 0.1 24 7 5 to 35

All values given are subject to 5-10% tolerance

SUPPLY	
Polypoxy MH	10L kit
Polyprime EP	5L & 15L kit
Polysolvent	5L & 20L pails

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Bitumen Modified Epoxy Coating

CHARACTERISTICS

- ► Excellent chloride & sulphate resistance
- High build coating, no primer required
- Excellent long term corrosion protection
- Abrasion resistant
- Seam less finish
- Easy to apply can be applied by brush, roller or spray.
- Does not Contain Asbestos, Chromated copper arsenate and Lead



DESCRIPTION

Polypoxy CT is a two component bitumen modified liquid epoxy resin coating. Polypoxy CT is a high build, dense, coating designed to protect concrete and metal structures.

FIELDS OF APPLICATION

To provide protection to concrete and metal structures such as:-

- concrete foundation
- steel pipes & ferrous metals
- off shore and marine structures

APPLICATION INSTRUCTIONS

Surface preparation

Surface to be coated with Polypoxy CT should be structurally sound, dimensionally stable, clean and free from laitance, oil or any other contaminants. Grit blasting is recommended for complete removal of deleterious materials and other contaminants which will affect the adhesion from the substrate. Metal surfaces should be grit blasted to a bright finish conforms to the Swedish Standard SA 2 $\frac{1}{2}$ or equivalent.

Mixing

Mix part A and part B separately for a minute and then transfer Part B (reactor) to Part A (base) and mix thoroughly for 2 –3 minutes to get a uniform homogenous consistency. Use a slow speed electric drill with a proprietary mixing paddle.



IDS Polypoxy CT GCC 1221

Application

Polypoxy CT can be applied by brush, short hair roller or airless spray. Apply the mixed material to a properly prepared substrate to achieve a uniform coating with a coverage rate of 3.5 m²/liter per coat. Subsequent coats shall be applied after the coating achieves its initial cure.

COVERAGE

3.5 m²/liter per coat to achieve a Dry Film Thickness (DFT) of 200 microns.

CLEANING

Clean all equipments with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

1

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately. ensure the container is available for the medical attendant to examine any relevant instructions and contents details. Reseal all containers after use and ensure product is stored as instructed on the safety section of the labeling.

SUPPLY	
Polypoxy CT	20 lt. kit
Polysolvent	5 lt. & 20 lt. pail

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES		
Appearance	Black		
Mixed Density, [g/cc]	1.2±0.05		
Solid content [%]	70 ± 2 (by volume)		
Pot life @ 25°C [mins]	60		
Pull out strength, [N/mm²]	>1.5		
Tack free time [hrs]	2		
Inital cure @ standard conditions [hrs]	24		
Full cure @ standard conditions [days]	7		
Water permeability @ 5 bar pressure, [mm]	Nil		
Over coating interval, @ 25°C, [hrs]	6-24		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polypoxy CR

Chemical resistant epoxy resin based coating

solvent free high build epoxy resin protective coating for concrete and steel





CHARACTERISTICS

- ► Highly Chemical resistant
- ► Easy to apply
- Solvent free
- ► Water proof and protective coating
- ► High build Coating
- ► Hygienic and easy to clean
- Does not Contain Asbestos, Chromated copper arsenate and Lead





DESCRIPTION

Polypoxy CR is a solvent free high build epoxy resin protective coating which provides a chemical resistant surface for concrete and steel.

FIELDS OF APPLICATION

- internal protection of concrete or metallic storage tank, certain chemicals, oil & fuel
- chemical resistant floor and wall coating for manholes, treated sewerage lines, manufacturing units, breweries, etc.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface preparation

New concrete surface to be treated must be 28 days old. Ensure that the moisture content of the surface is less than 5%. The surface shall be free from dust, dirt, curing compound and laitance. The cleaning shall be done by grit/captive blasting or mechanical grinding. The concrete should be sound and any cracks, pot holes shall be repaired with Polypoxy BF* or Polypoxy NF*. prior to the application of the coating make sure that the surface is absolutely dry.

Priming

The coating can be directly applied on new concrete surface, provided the surface preparation is done



TDS_Polypoxy CR_GCC_0625

1

thoroughly to ensure good adhesion. For old and porous concrete, prime the prepared surface with Polyprime EP@ 4-5m2/L. The coating is applied when the primer is in a tacky to semitacky condition. However, in all circumstances, the coating shall be applied within 12 hours of application of the primer. If the primer surface is left open for more than 12 hours, then a fresh coat of primer has to be reapplied.

Mixing

Mix part A (resin) and part B (hardener) separately for 1 minute using a slow speed drill fitted with a paddle. Then add part B into part A and mix thoroughly for 2 - 3 minutes to achieve uniform consistency. Apply immediately after mixing.

Application

Polypoxy CR may be applied by brush, squeegee, roller or industrial sprayer. The coating shall be applied @0.3 L/m²/coat to achieve a dry film thickness of 300 microns. As the coating is heavy bodied, it is advisable to apply extra coats on vertical than in horizontal, to avoid sagging of the product. Each subsequent coat shall be applied only after the previous coat dries off completely. After application the coating must be back rolled to reduce surface irregularities and improve bonding. Please contact our techinical service team for specific requirement.

Quality for Professionals

2

CLEANING

Clean all equipments with a Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

CHEMICAL RESISTANCE

- sulphuric acid (10%)
- lactic acid (10%)
- nitric acid (10%)
- sodium hydroxide (50%)
- diesel
- battery water
- vegetable oil
- formaldehyde (40%)
- aviation fuel
- sea water
- gasoline

LIMITATIONS

Polypoxy CR is prone to discoloration and colour deviation on UV exposure. This has no influence on the performance of the coating.

COVERAGE		
Polyprime EP	4-5 m ² /L	
Polypoxy CR	0.3L/m² / coat for 300 micron dry film thickness	
SUPPLY		
Polypoxy CR	3.5L kit - 18L kit	
Polyprime EP	5L & 15L kit	
Polypoxy BF	3kg kit	
Polypoxy NF	3kg kit	
Polysolvent	5L & 20L pails	
* D [,] ! ! T T T T		

^{*} Refer to website for TDS

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Density, [g/cc]	1.45±0.05	ASTM D 1475	
Colors	Grey & Black (3.5L & 18L)		
Solid content, [%]	100	ASTM D 2697	
Application life, [minutes]	30	-	
Tack free time, [hours]	6	ASTM D 5895	
Initial cure, [hours]	12	-	
Full cure, [days]	7	-	
Adhesion strength, [N/mm ²]	≥ 2	ASTM D 4541 BS 1881	
Water absorption, [%]	~ 0	ASTM D 570	
Abrasion resistance, [mg]	<100	ASTM D 4060	
Application temperature, [°C]	5 to 35		
Service temp, [°C]	5 to 70		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Acrylic aliphatic protective and anti carbonation coating

for reinforced concrete and masonry surfaces

CHARACTERISTICS

- ► Highly durable.
- ► Excellent flexural and elastomeric properties.
- ► High UV resistance and resistance to long term weathering effects.
- ▶ Available in various colors. Low maintenance cost.
- ► Excellent barrier to various chemicals like CO₂, chloride ions, sulphates, oxygen, water and other aggressive contaminants.
- Breathable and can allow moisture vapor to escape from the structure.





DESCRIPTION

Polyguard 101 is an acrylic aliphatic based protective and anti carbonation coating for reinforced concrete and masonry surfaces. It consists of a single component pigmented coating ready for immediate site uses. Polyguard 101 is applied on a silane siloxane penetrative primer which works by penetrating into the pores of concrete, masonry or stone work and reacts with moisture or water vapor that is present thus forming a hydrophobic silane siloxane seal to the capillary pores. This hydrophobic treatment is very effective in reducing the passage of water and water borne salts whilst allowing moisture vapor to dissipate to the atmosphere.

FIELDS OF APPLICATION

- used as a protective coating for exposed concrete structures such as bridge decks, tunnels, reinforced fill panels, marine and coastal structures from chloride ions, sulphates, carbon dioxide and water.
- used to protect other cementitious and masonry substrates from aggressive marine and coastal environment.

Typical application includes:

- bridged decks.
- concrete precast units
- concrete reservoirs



TDS Polyguard 101 GCC 0519

- boundary walls
- marine structures

APPLICATION INSTRUCTIONS

Surface preparation

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the coating system is as follows: The surface must be structurally sound and free of oil, grease, dust and other contaminants which will affect the bonding. Any structural cracks and potholes shall be repaired with a suitable repair mortar from the Polycrete* range of repair mortars.

Application

Apply a penetrative primer coat of Polyxane* to the prepared dry surface. This will impregnate the surface and form an impervious barrier to moisture and other environmental contaminants. For best results apply the primer @ 4-5 m²/L/coat. Depending on the porosity and nature of the substrate a second coat is recommended to be given after the first coat has dried off completely. Stir the contents of the Polyguard 101 pail thoroughly before use. The first coat of Polyguard 101 is to be applied on the dry

Quality for Professionals

primer at the rate of $2.5 \text{ m}^2/\text{L}$ for 200 microns D.F.T. the coating can be applied with a brush, roller or an airless spray.

Apply the second coat at right angles to the first coat at the same rate. The second coat is to be applied only after the first is completely dry.

Curing

Allow the coating to cure for a period of 7 days to achieve its full properties.

CLEANING & DISPOSAL

Clean all tools with water after use. Hardened materials can be removed mechanically only. Allow the waste to cure. Seal it into a suitable container and bury in landfill. use licensed waste disposal contractor and consult the local authorities when disposing.

COVERAGE	
Polyxane	4-5 m ² /L
Polyguard 101	$2.5~\text{m}^2/\text{L}/\text{coat for }200\mu$ D.F.T.

STORAGE AND SHELF LIFE

The pails and drums must be stored in a covered area, away from direct sunlight, UV and other sources of heat. The shelf life of the product is up to 12 months if stored as per recommendations. Excessive exposure to sunlight and UV will result in deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes immediately with fresh water. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY		
Polyguard 101	20L pail	
Polyxane	20L pail	

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Density, [g/cc]	1.15 ± 0.05	ASTM D 1475	
Reduction in chloride ion penetration, [%]	≥ 97	-	
Water vapor transmission, [g/m²/day]	< 13	ASTM E 96	
Reduction in water absorption, [%]	≥ 82	-	
CO ₂ diffusion resistance	Resistant	-	
Chloride ion diffusion resistance	Resistant	-	
Crack bridging [non cyclic cracks], [mm]	0.6	ASTM C 1305	
Adhesion strength, [N/mm²]	≥1.5	ASTM D 4541	
UV resistance	Excellent		
Application temperature, [°C]	5 to 45		
Service temperature, [°C]	- 5 to 70		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed,





Acrylic aliphatic protective and anti-carbonation coating

Smooth finished, flexible, one component coating for reinforced concrete and masonry surfaces.

CHARACTERISTICS

- ► Highly durable
- ► Excellent flexural and elastomeric properties
- ► High UV resistance
- Resistance to long term weathering and water effect
- ► Excellent barrier to various chemicals like CO₂, chloride ions, sulphates, oxygen, water and other aggressive contaminants
- ► Breathable and can allow moisture vapor to escape from the structure
- Available in various colors, Low maintenance cost
- Environment friendly water based product suitable forenclosed areas





DESCRIPTION

Polyguard 102S is a silk/smooth finished, flexible, one component, acrylic aliphatic based protective and anticarbonation coating for reinforced concrete and masonry surfaces

FIELDS OF APPLICATION

- used as a protective coating for exposed concrete structures such as bridge decks, tunnels, reservoirs, reinforced fill panels, concrete precast units, marine andcoastal structures.
- used as a protective coating for car park structures
- used to protect exterior surface of cementious and masonry substrates from aggressive marine and coastal environment.
- used for interior surfaces creating special decorative effects

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for application of the coating system is as follows:



TDS Polyguard 102S GCC 0519

Surface preparation

The surface must be structurally sound and free of oil, grease, dust and other contaminants which will affect the bonding. Any structural cracks and potholes shall be repaired with a suitable repair mortar from the Polycrete* range of repairmortars. To fill pores, blowholes, minor honey combs or as a skim coat, Polyfill AC* shall be used. The surface to be treated should be presaturated with water prior to application. However, any standing water shall be removed prior to application. The temperature of the substrate should be min 10°C and min 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate.

Application

Apply a penetrative primer coat of solvent based acrylic primer(Polyprime AC) to the prepared dry surface. This will impregnate the surface and form an impervious barrier to moisture and other environmental contaminants. Depending on the porosity and nature of the substrate a second coat is recommended to be given after the first coat has dried off completely.

Mixing

Mix the contents of the Polyguard 102S pail thoroughly before use. The first coat of Polyguard 102S is to be

2

applied on the dry primer. The coating can be applied with a brush, roller or an airless spray. Apply the second coat at right angles to the firstcoat at the same rate. The second coat is to be applied only after the first is completely dry.

Curing

Allow the coating to cure for a period of 7 days to achieve its full properties.

CLEANING & DISPOSAL

Clean all tools with water after use. Hardened materials can be removed mechanically only. Allow the waste to cure. Seal it into a suitable container and bury in landfill. Use licensed waste disposal contractor and consult the local authorities when disposing.

COVERAGE

Polyguard 102S

 $5m^2/L$ / coat for 200μ W.F.T.

STORAGE AND SHELF LIFE

The pails and drums must be stored in a covered area, away from direct sunlight, UV and othersources of heat. The shelf life of the product is upto 12 months if stored as per recommendations. Excessive exposure to sunlight and UV will result indeterioration of the quality of the product andreduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treatany splashes to the skin or eyes immediately with fresh water. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

Polyguard 102S	20L pail
Polyprime AC	20L pail & 200L drum

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

I E GITTI GAL OF E GIT	IGAIIGII	
PROPERTIES	VALUES	TEST STANDARDS
Color	White/grey [other	
	colours as per	
Finish	requirement] Smooth/silk	
	$\frac{3\text{mooth/slik}}{1.25 \pm 0.05}$	ACTAA D 1.475
Density, [g/cc]		ASTM D 1475
Solids content, [vol%]	43	ASTM D 1644
VOC, [g/l]	< 50	ASTM D 3960
Water resistance	Very good	
Application temperature, [°C]	5 to 45	
Service temperature, [°C]	- 5 to 70	
Drying time touch dry	1.1	
recoatable full care	1 hour 7 hours	
	7 days	
Crack bridging, [mm]	2	EN 14891:2004
CO ₂ diffusion Resistance,		<u> </u>
equivalent air layer thickness,		
[R meters]	570	EN 1504-2
CO ₂ diffusion resistance,		
equivalent thickness of 30n/mm		EN 15040
concrete cover, [mm]	1400	EN 1504-2
Chloride ion diffusion rate,	20	DOW
[ppm/day]	20	
Water Vapor transmission. transmission Rate, [g/(h*m²)]	2.64	ASTM D 1653
Water vapor diffusion		
resistance, [sd (m)]	0.4	ASTM D 1653
Elongation, [%]	617	ASTM d 2370
Adhesion Strength, [N/mm ²]	1.7	ASTM D 4541
Tensile strength, [Mpa]	1.3	ASTM D 237
Accelerated weathering in		
weather-o-meter G156,		
wom 1000hours elongation after weathering, [%]	365	ASTM D 4798
Tensile strength after	303	A31W D 4770
weathering, [mpa]	2.7	
Total solar reflectance, [%]	83	ASTM C 1549
Emissivity, [%]	91	ASTM C 1471
Water swell [7 days] [%]	18.95	ASTM 471
Dirt pickup resistance % of		
y reflectance retained after		
exposure to dirt, [%]	99.70%	DOW
Fire testing, spread of flame	Class I	ASTM E 84
	= = 0.07	

TECHNICAL SPECIFICATION

All values given are subject to 5-10% tolerance



^{*} Refer to website for TDS



2 component UV stable, Polyurethane protective coating

CHARACTERISTICS

- ► Highly durable and UV stable
- ► Excellent abrasion resistance
- ► Good chemical resistance
- Can be applied to many different substrates and on cured epoxy systems
- ► Excellent glossy surface finish with different colors
- Easy to apply
- ▶ Does not Contain Asbestos, Chromated copper arsenate and Lead





DESCRIPTION

Polyguard PU is a 2 component UV stable polyurethane protective coating system. The coating provides a seamless chemical and abrasion resistant coating to cured epoxy systems, metal and concrete surfaces both internal and external.

FIELDS OF APPLICATION

Polyguard PU is designed as a protective and wear resistant coating for new and existing trafficked areas such as:

- sewage works / effluent treatment plants
- chemical processing areas.
- concrete floors / Factory ware houses.
- bridge and Culvert Decks
- swimming pool decks.
- jetties, harbors.
- stadiums, Balconies & Plant rooms.
- factory ware houses

APPLICATION INSTRUCTION

Surface preparation

Concrete surfaces:

The concrete surface to be coated must be clean, dry and free of laitance, oil, grease or any substance that may impair adhesion. Methods of substrate preparation includes, grit blasting, highpressure water jet cleaning, surface grinding etc. Weak or damaged concrete must be removed and repaired properly with Polypoxy NF.



TDS Polyguard PU GCC 0524

Priming

Prime the surface with Polyprime EP (Solvent free 100% solid epoxy primer @ 4-5 m2/kg) depending on the substrate condition.

Metal surfaces

Surface should be sand blasted or should be manually or mechanically sanded get a rust free finish. if necessary prime the surface with Polyprime EPS.

Fully cured epoxy surface

Clean the surface thoroughly, remove dust or any oil which is left on the surface and directly apply Polyguard PU. Note:-Primers should be completely dry before applying Polyguard PU.

Mixing

Mix both parts of Polyguard PU thoroughly for a few minutes to remove any sediment. Then add the contents of Part B to Part A and mix with a suitable paddle mixer fitted to a slow speed electric drill. The mixing is to be continued till a uniform and homogenous consistency is achieved.

Application

The material can be applied with a brush, roller. Apply the mixed material @ 4-5m² /L. if required a second coat can be applied at right angles to the first coat at the same coverage rate. For getting an anti skid finish, broadcast Aggregate no. 8 @ 0.5-1.2 kg/m² on the wet primer.

Quality for Professionals

Leave it for 24 hours and then when the primer has fully set, brush/vacuum away the excess aggregate from the surface. Apply the top coat as specified.

	·
COVERAGE	
Primer Aggregate no. 8 Polyguard PU	4-5 m ² /L 0.5 -1.2 kg/m ² 4-5 m ² /L/coat
SUPPLY	
Primer Aggregate no. 8 Polyguard PU	5L 25 kg bag 15L

CLEANING

Clean all the tools with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store in a cool dry and shaded place. Protect from extreme weather conditions like storm & rain. The shelf life will be 12 months when stored out of contact with moisture at standard storage conditions.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

TECHNICAL PROPE	RTIES
Pot life	30-40 min at 25°C
Density	1.2 g/cc
Solid content	65 %
Pendulum hardness	73 seconds
Abrasion resistance	50 mg (ASTM-D-4060) i0 n load, 1000 cycles, CS 10 roller
Touch dry	4 Hours at 25° C
Re-coatable	24 Hours
Full cure	7 Days
Color	Grey (other colors on request)
Resistance to	Dilute acids, alkalis, solvent, starch solution and milk
Application thickness	100-150 microns DFT / Coat
Coverage	4-5 m ² / L
Mix ratio	4:1 by vol. (Part A: Part B)
Application temperature	+10° C to + 45° C
Service temperature	-20° C to + 75° C

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





SBR based bonding agent and admixture

used in mortar and concrete as an admixture and bonding agent to increase its water resistance and durability





CHARACTERISTICS

- ▶ Enhances the flexural and tensile strength of the mortar and render
- ▶ Provides good resistance to water and moisture vapour transmission
- Improves the chemical and abrasion resistant properties of the mortar
- Can be applied in thin screed without cracking
- ► Reduces the water/cement ratio
- ► Easy to use
- ► Compatible with all types of cements
- ► Reduces shrinkage
- ► Excellent adhesion to most building materials
- ► Good resistance to salt permeation
- Prolonged corrosion protection
- Similar thermal expansion and modulus properties like concrete
- ► Can be used in potable water applications







DESCRIPTION

Polybond SBR is a Styrene Butadiene Rubber co-polymer based product which is used in mortar and concrete as an admixture and bonding agent to increase its water resistance and durability.

FIELDS OF APPLICATION

- bonding: for bonding of new to old concrete, tile bedding and fixing of slip bricks.
- waterproofing internally: basements, swimming pools, potable water tanks, sludge tanks & ducts, tunnels and underpasses.
- waterproofing externally: structures above ground
- waterproofing suspended floors: patios, walkways, balconies, wet areas, plant rooms.
- waterproof bonding: bricks slips, copings, precast treads and risers.
- waterproof/protective slurries: potable water tanks, sewerage and mild chemical holding tanks, porous concrete, block work and long term protection of reinforcements or friable concrete soffits.



repair of concrete.

admixture: as an admixture for cementitious systems and tile adhesives/grouts. Improves the durability, water proofing and abrasion resistance properties of mortars.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit-Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface preparation

Surface to which Polybond SBR mixes are to be applied shall be clean, sound and free of all loose particles. Remove all laitance, oil & grease, mould oil, curing compound from surface. Ensure that the exposed reinforcing steel is clean and free from scale and rust. When repairing damaged concrete, ensure that the concrete has been cut back to thoroughly sound material.

Bonding slurry

Saturate absorbent surfaces with water completely till it reaches a saturate surface dry condition. However, ensure that the surface is free of standing water. Prepare a bonding slurry by mixing 2 parts O.P. cement to 1 part of Polybond SBR (by volume). Using a stiff brush, work the bonding slurry well into the damp surface, ensuring that no pinholes are visible. Do not apply bonding slurry at a thickness

TDS_Polybond SBR_GCC_0322

in excess of 2mm. If a second coat is necessary, it must be applied at right angles to the first to ensure complete coverage. (Approximately 25L of Polybond SBR mixed with 50kg of O.P cement will give a creamy slurry which will cover 15-40m² depending on the surface texture and thickness applied).

SBR modified mixes

Sand: Sand should be washed and well graded Cement: Polybond SBR is compatible with all types of opc, SRC and high alumina cements.

Water: The strong plasticizing action of Polybond SBR greatly reduces the water cement ratio for any given workability.

Polybond SBR: Minimum dosage of 10L per 50kg of cement is recommended to be used. For more demanding situations 15L per 50 kg of cement is recommended. Mixing should be carried out in an efficient concrete mixer - where available a pan type mixer is recommended. Pour the required quantity of sand and cement and premix for approximately one minute. Pour the required quantity of Polybond SBR and mix for two minutes. Add the water slowly until the required consistency is achieved. Avoid adding excessive water which will result in segregation and bleeding.

Render to vertical surfaces

Apply the bonding slurry to the prepared surface and then render immediately with Polybond SBR modified mortar. Apply in coats to a maximum thickness of 5mm per coat. Several coats can be applied at intervals of 20-30 minutes. Thicker coating can be applied when suitable form work is used. Finish the surface using wooden float or steel trowel.

Screeds and toppings

Screeds based on Polybond SBR modified mix should be placed over the wet bonding slurry, well compacted and struck off to level. It may be trowelled to the required finish using a steel trowel.

Curing

As soon as the Polybond SBR modified mortar and screed achieves its final set, adequate curing shall be carried out. Water sprinkling, ponding or the use of a non-degradable type of curing compound may be used.

DOSAGE

For normal use with cement sand screed, the standard dosage of 10L of Polybond SBR per 50 kg of portland cement is recommended.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

TECHNICAL SPECIFICATION

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skins or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

TECHNICAL SPEC	CIFICATION	
PROPERTIES	VALUES	TEST STANDARDS
Color & appearance	white milky liquid	-
рН	8.5-10	-
Density, [g/cc]	1.0±0.05	ASTM 1475
Solid content, [%]	40±3	ASTM D 2939
SBR modified mix [w/c: 0.4	45 and 350 kg cement	t]
Compressive strength, [N/mm²]	>40	ASTM C 579
Flexural strength, [N/mm²]	> 12	ASTM C 580
Tensile strength, [N/mm²]	> 6	ASTM C 307
Shear bond strength, [N/mm²]	>5	ASTM C 882
Application temperature, [°C]	5 to 45	-
Service temperature, [°C]	-5 to 45	-

All values given are subject to 5-10% tolerance

Standards

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

ASTM C 1059





Polybond PVA

PVA based bonding agent and admixture

used as a surface sealer, bonding agent and admixture for cement and mortar.





CHARACTERISTICS

- ► Bonds to most common construction material except PVC rubber and similar products
- ▶ Versitile
- ► Enhances adhesion
- ► Increases strength



FIELDS OF APPLICATION

- Adhesive

Polybond PVA bonds with almost all kinds of building materials except PVC, rubber and polyethylene. When added with suitable filler, it can be used for fixing plasterboard, ceramic tiles, marbles etc.

Bonding Agent

Polybond PVA gives mortars, especially topping mortars enhanced bond strength. The wear resistance of screed treated with Polybond PVA is improved than that of a conventional sand and cement screed. The topping will be dust free, wear, water, oil and grease resistant

Admixture

Polybond PVA has a plasticizing effect which improves mortar application, increases the mechanical strength of screeds and renders, reduces shrinkage and has perfect adhesion even on smooth concrete

- Surface sealer

Polybond PVA can be used as a surface sealer for concrete and floors to minimize the dusting and penetration of oils. It can be used as an effective primer on certain decorative coatings

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED $^{\rm I\!R}$ v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

DESCRIPTION

Polybond PVA is a polyvinyl acetate based polyvinyl alcohol suspension used as a surface sealer, bonding agent and admixture for cement and mortar.



APPLICATION INSTRUCTIONS

As an adhesive for uneven surfaces

Make a paste of Polybond PVA diluted with equal amount of water, cement and fine sand. The paste can be applied as an adhesive for fixing plaster boards, polystyrene tiles. To ceiling and walls. If the surface is highly porous, apply a primer coat of Polybond PVA mixed with water in the ratio of 1:3.

As a bonding agent for screeds, plasters and renders

The surface shall be sound and free from all contaminants, such as oil, grease, paint etc. Sealing of the surface is done with 1 part of Polybond PVA with 3 parts of water. Apply the bonding coat followed by the application of the render, screed or plaster normally. The same method shall be used to bond new to old concrete.

As an admixture

For normal to heavy duty flooring, 20-30L of Polybond PVA is the recommended to be admixed with 100 kg cement.

For heavy renderings and cementitious toppings

Seal and prime the surfaces with Polybond PVA diluted with 3 parts of water. Prepare the render coat with 1 part of ordinary portland cement, 1 part clean washed sand and 1 part of Polybond PVA to 3 parts of clean water. Apply this to the tacky prime coat. 10 to 15L of Polybond PVA per 100 kg cement is recommended.

Note: Stir the contents of the product thoroughly, before use

LIMITATIONS:

- not recommended where permanent dampness occurs.
- do not use below 5°C
- do not over towel

CLEANING

Clean all the tools with water immediately after use.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Polybond PVA	5L, 20L pails & 200L drum
i oryboria i 17 t	or, zor pans a zoor arom

DOSAGE

As an admixture			
Floor screeds/topping	20-30L of Polybond PVA per 100 kg cement i.e. 100-150L /m³ of mortar approximately		
Render coat	10-15L /100 kg cement		
As a Primer /adhesive / bonding coat			
Neat	1L / 10 m ²		
dilute1:1	1L / 20 m ²		
dilute1:3	10-15L / 35m²		

These values will vary according to the degree of porosity and texture of the surface.

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Appearance	White viscous liquid	-
Solid content, [%]	30±3	ASTM D 2939
рН	6-7.5	BS EN ISO 787
Specific gravity	1.05±0.05	ASTM D 1475
Application temperature,		
[°C]	5 to 45	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Acrylic based bonding agent

Used as an admixture for cementitous mortars and screeds





CHARACTERISTICS

- ▶ Improves bond, flexural and tensile strength of cementitious mixes
- ► Reduces the permeability of mortar
- ► Single component, easy to apply
- ► Suitable for internal and external application







DESCRIPTION

Polybond AC is a single component, acrylic polymer based emulsion, designed as an admixture for cementitous mortars and screeds and as a bonding and curing agent for concrete and patch repairs.

FIELDS OF APPLICATION4

- bonding agent for bonding new concrete to old concrete
- bonding agent in high strength repair and patching mortar
- bonding agent for GRC mixes
- bonding / curing agent for Polycrete* repair systems

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit-Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface preparation:

Surface to which Polybond AC mixes are to be applied should be clean, sound and free of loosely adhering material. Remove all laitance, oil, grease, mould oil or curing compound from concrete surface using wire brush, bush hammer or by blasting. Ensure that reinforcing steel is clean and free from scale and rust. When repairing damaged concrete, ensure that the concrete has been cut back to thoroughly sound substrate.

Bonding slurry

Wet down absorbent surfaces, such as concrete, brick, stone, ensuring that they are fully saturated but free of surface water. Prepare a bonding slurry of 1 to 2 parts



TDS Polybond AC GCC 0322

cement to 1 part of Polybond AC mixed to a lump-free creamy consistency. Using a stiff brush, work the bonding slurry well into the damp surface, ensuring that no pinholes are visible. Do not apply bonding slurry at a thickness in excess of 2mm. If a second coat is necessary, it must be applied at right angles to the first coat to ensure complete coverage. the mixed bonding slurry should be applied at 1-2 kg/m². For bonding of patch repairs using Polycrete repair mortars apply undiluted at 5 to 6 m²/L.

Polybond AC modified mixes:

Sand: Sand should be washed and well graded. cement: Polybond AC is compatible with all types of opc, sulphate resisting and high alumina cements.

Water: The strong plasticizing action of Polybond AC greatly reduces the water cement ratio for any given workability.

Polybond AC: Standard dose is 5-8L per 50 kg of cement used. For more demanding situations, and greater exposure to aggressive environment 15L per 50 kg of cement is recommended. Mixing should be carried out in an efficient concrete mixer. Charge the mixer with required quantity of sand and cement and premix for approximately one minute. Pour the required quantity of Polybond AC and mix for two minutes only to avoid excessive air entrainment. Add the water slowly until the required consistency is achieved. Avoid adding excessive water.

1

Render to vertical surfaces:

Apply the bonding slurry to the prepared surface and then render immediately with Polybond AC modified mortar. Apply in coats to a maximum thickness of 5mm per coat. Several coats can be applied at intervals of 20-30 minutes. Thicker coating can be applied when suitable form work is used. Finish the surface using wooden float or steel trowel.

Screeds and topping

Screeds, patches based on Polybond AC modified mix should be placed over the tacky bonding slurry, well compacted and struck off to level. It may me trowelled to the required finish using a steel trowel.

CURING

Proper curing of Polybond AC modified mixes is vital. Small patch repairs can be cured with Polybond AC. Large areas should be cured by resin based curing compounds, wet hessian or water mist methods.

DOSAGE RATE

For normal use with cement sand screed, the standard doses of 5-8L of Polybond AC for 50kg of opc is recommended.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skins or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY

Polybond AC 20L pail & 200L drum

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Color	Milky white	-	
Specific gravity, [g/cc]	1.0±0.05	ASTM D 1475	
Solid content, [%]	30±2	ASTM 2939	
Slant Shear bond Strength,			
[N/mm ²]	3.5	-	
Application temperature, [°C]	5 to 45	-	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polybond EP

Epoxy primer and bonding agent

For the bonding of new concrete /render to old concrete.





CHARACTERISTICS

- ► High bonding strength, ultimate bond strength is greater than cohesive strength of concrete
- Moisture tolerant, can be applied on slightly damp surfaces
- ► Non-shrinking
- ► High chemical resistance
- ▶ High durability
- ► Can be applied in both internal and external areas







DESCRIPTION

Polybond EP is an epoxy bonding agent and adhesive for the bonding of new concrete /render to old concrete. Polybond EP does not shrink and can be applied on slightly damp areas as well.

FIELDS OF APPLICATION

- bonding old to new concrete
- repair of concrete
- old and worn concrete
- glazed tile and bricks
- engineered and semi engineered bricks
- offshore and marine structures

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface preparation

All surfaces must be structurally sound and clean. Remove traces of oil, loose particles, laitance, demoulding agent, curing compound, grease, paint or bitumen. Smooth surfaces shall be abraded to get a mechanical key. If the concrete surface is not suitable or has disintegrated badly, chip off the degraded areas until a sound surface is obtained. New concrete should be cured until the shrinkage and moisture movement is the minimum.



Mixing

Pour part 'B' hardener to part 'A' resin pail and mix thoroughly to get a homogenous color and consistency.

Application

Polybond EP may be applied evenly with a short haired brush or with a trowel. Place the screed /concrete or repair mortar immediately after application of Polybond EP to avoid contamination. If the bonding agent dries out, apply a fresh coat.

COVERAGE

3-5 m²/L

CLEANING

All tools shall be cleaned with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened condition and if stored as per recommendations. excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately. Ensure the container is available for the medical attendant to examine any relevant instructions and content details. Reseal all the containers after use and ensure product is stored as instructed on the safety section of the labeling.

SUPPLY	
Polybond EP	1 L & 5 L kit
Polysolvent	5L & 20L pails

TECHNICAL SPECIFICATION				
PROPERTIES	VALUES	TEST STANDARDS		
Color & appearance	Off white viscous liquid	-		
Density, [g/cc]	1.3±0.05	ASTM D 1475		
Application life, [minutes]	90	BS 4254		
Tack free time, [hours]	5	ASTM C 882		
Slant shear bond strength, [N/mm²]	> 12	ASTM C 882		
Water absorption @24 hours, [%]	< 1	ASTM D 570		
Standards	ASTM C 881 Type I, II, III, V, VI, Grade 3, class D, E & F			
Application temperature, [°C]	5 to 35	-		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Acrylic based concrete curing compound

Used to prevent rapid evaporation of water from fresh concrete ensuring uniform hydration, adequate strength development





CHARACTERISTICS

- ▶ Dual protection as curing and sealing compound
- Protects concrete from water borne chlorides, sulphates and atmospheric carbon dioxide
- ► Economical, Labour saving, Easy to apply







DESCRIPTION

Polycure AC is a non-degradable liquid type of curing and sealing compound based on acrylic and proper wetting agents. Polycure AC is used to prevent rapid evaporation of water from fresh concrete ensuring uniform hydration, adequate strength development and minimizes plastic and drying shrinkage cracks. This will also act as sealing coat for protecting concrete from the attack of water borne salts and ingress of carbon dioxide from the atmosphere. The cured film further acts as a primer system for subsequent surface finishes. It also provides a dust free surface to the concrete with a reduced incidence of drying shrinkage cracks.

FIELDS OF APPLICATION

A cost effective curing compound as well as surface sealer for fresh concrete. An effective alternative to hessian, water or polyethelyne curing aids.

Polycure AC is suitable for use on all concrete surfaces and acts as a more effective and economical alternative to separate curing, priming systems.

- in high rise construction where continous wet curing is not possible.
- in areas subjected to high drying winds which require continuous curing.
- surfaces, which requires subsequent finishes.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit-Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Mix the contents of the drum thoroughly prior to the application in order to remove the sediments. It is



TDS Polycure AC GCC 0322

recommended that the curing compound is applied immediately after the initial bleed water evaporates and the concrete has achieved its initial set. In case of deshuttering, the concrete surface is wetted with water but not with free standing water, before the curing compound is applied. The application can be done by a brush, roller or an airless spray at a coverage rate of 5m²/L. For highly porous surfaces, a second coat has to be applied at the same coverage rate.

PRIMER FOR SUBSEQUENT FINISHES

Polycure AC acts as a primer and bonding agents for the following systems:

- water based emulsion paint systems containing PVA, PVC, and acrylic co-polymers
- tile adhesives based on the above polymers
- bitumen based emulsions or solutions
- cementitious systems

Note:

- concrete curing compound will effectively prevent evaporation of water from concrete, provided it is not puctured or damaged, but will not allow the ingress of water to replenish that is lost by self desiccation.
- where water curing is inconvenient or potable water for curing is not available, sealing fresh concrete surface with curing compound is the best alternate curing method.

Quality for Professionals

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

&	& 200I	_ drum
		. & 200l

IECHNICAL	SPECIFICATION	
		_

PROPERTIES	VALUES	TEST STANDARDS
Appearance	White liquid	-
Specific gravity, [g/cc]	1.0±0.05	ASTM D 1475
Toxicity	Non toxic	-
Applicable standard	ASTM C 309 Type 1&2, class A ASTM C 156	&B -
Application temperature [°C]		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Chemical mould release oil

To be applied on mould and shutter surfaces prior to casting concrete.

CHARACTERISTICS

- ► Single component
- ► Easy to apply
- ► Ensures smooth of uniform finish



DESCRIPTION

Polyrelease is a chemical release agent applied on mould and shutter surfaces prior to casting concrete. It ensures a smooth and uniform finish to the concrete.

FIELDS OF APPLICATION

Polyrelease can be applied on any form work such as:

- plywood
- metal
- plastic
- concrete

ACTION

The alkali reactive chemicals in Polyrelease promote a water repellent interface, which protects both steel and timber formwork, whilst ensuring concrete a smooth, hard and uniform finish with reduced incidence of blow holes. Polyrelease has no negative effect on the properties of concrete nor will it impair the adhesion on subsequent surface treatment when applied at the coverage rates. Polyrelease will not stain the concrete surface.

APPLICATION INSTRUCTIONS

Forms should be clean and rust free. Apply a thin coating of Polyrelease with a fine brush or a spray unit before casting. Excessive application should be avoided as it is self migrating. Whenever new timber or plywood is used, an initial spray coat should be applied to seal the pores on the surface.

COVERAGE

The coverage rate of Polyrelease is 30-70 m²/L this depends on the surface density and porosity of the formwork.



1

SPECIAL PROPERTIES

Polyrelease will not be washed off by rain and is a non corrosive material.

CLEANING

Clean all the tools with detergent solution.

STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. In tropical climates, store in air condition rooms. The shelf life is up to 12 months in unopened conditions and if stored as per recommendations. Excessive exposure to sunlight, humidity and UV will result in the deterioration of the quality of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting but call for medical assistance immediately.

SUPPLY Polyrelease 20L & 200L drums

TECHNICAL SPECIFICATION	
PROPERTIES	VALUES
Appearance	Amber
Specific gravity @20°C	0.8 ± 0.05
Flash point, [°C]	70
Chloride content, [%]	Negligible
Application temperature, [°C]	5 to 55

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polyrelease WB

Water Based Mould Release Agent

CHARACTERISTICS

- ▶ Non staining.
- ► Non hazardous, nontoxic.
- ► Ensuring fair faced concrete.
- ► Suitable for all types of form work



DESCRIPTION

Polyrelease WB is a water based release agent, with excellent release properties and superior to those of conventional mould oils. Polyrelease WB on application to the moulds provides a water repellent interface and ensures an even color, texture and uniform smooth finish to the concrete.

FIELDS OF APPLICATION

- Can be applied on moulds such as timber, plywood, steel, GRP, etc.
- Ensures high quality fair faced stain free concrete and easy stripping of moulds.

APPLICATION

Surface of forms/shutter shall be clean and rust free. All traces of adherent materials in the form work must be removed prior to use. Polyrelease WB may be applied by fine brush or conventional mould oil sprayer ensuring a light continuous film. Excessive application should be avoided. In case of new timber/plywood, an initial spray coat may be required to seal the pores on the surface. Polyrelease WB on application to the surface shall be kept undisturbed till it dries fully. In hot climates it dries within 15 – 30 minutes but at low temperatures and high humidity 1 to 2 hours might be required.

COVERAGE

Coverage depends on porosity of the material of the mould and ranges from 40 – 60 m2/litre. The coverage may vary depending on the porosity and surface finish.

PACKING

20L pail & 200L. Drum.



TDS Polyrelease WB GCC 0519

1

STORAGE

Store under cover, out of direct sunlight and protect from extreme temperatures. In tropical climates the product must be stored in air – conditioned environment.

SHELF LIFE

Shelf life up to 12 months when stored as per recommendations.

HEALTH AND SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting but call for medical assistance immediately.

TECHNICAL PROPERTIES		
Color	White	
Form	Liquid	
Specific gravity	1.0 at 200C	
Flash point	Not applicable	

Quality for Professionals

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



04 FLOORING SOLUTIONS

SYSTEMS

Polydeck 2000 UV stable car park coating system

Polydeck 4000 Solvent free epoxy non-exposed area coating system

PRIMERS

Polyprime EP Solvent free epoxy resin primer and sealer

Polyprime PU Solvent free epoxy resin primer and sealer

FLOOR HARDENERS

Polypoxy BF Epoxy repair putty and blow hole filler

Polypoxy Epoxy resin based chemical and abrasion resistant screed

Polypoxy SL 20 Epoxy resin based self levelling floor topping

Polypoxy SL 40 Epoxy resin based self levelling floor topping

Polyhard Mineral based dry shake floor hardener

TOP COATS

Polypur TC 20 UV stable, polyurethane car park deck coating

Polypoxy FC Solvent free epoxy resin coating

Polypur LMP Line marking paint for roads and parkings



Polydeck 2000

UV stable car park coating system

Durable and seamless polyurethane based parking deck coating system for both covered and exposed areas

CHARACTERISTICS

- ► Highly durable and abrasion resistant
- ► Easy to apply and available in different colors
- ▶ UV stable. Can be applied on exposed areas







DESCRIPTION

Polydeck 2000 is a tough, durable and UV stable polyurethane based parking deck coating system. It provides a seamless, abrasion resistant floor coating system for both covered and exposed areas.

FIELDS OF APPLICATION

Polydeck 2000 is designed as a protective, wear resistant coating for new and existing trafficked areas such as:

- car park decks, ramps
- trafficable flat roofs
- plant rooms
- stadiums, Industrial floors
- helipads
- airport Hangers
- balconies and as a general protective coating of concrete from water, salt, chemical spillage, sports areas

Polydeck 2000 system consists of a Primer, anti slip aggregate (if anti slip finish is required) and a U.V. stable polyurethane resin based top coat.

Polyprime PU

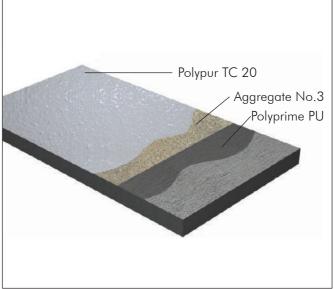
Two component solvent free epoxy primer of low viscosity.

Aggregate no. 3

Anti-slip graded quartz aggregate of particle size between 0.3-0.7mm. Used to provide a skid and abrasion resistant floor finish to heavily trafficked areas.

Polypur TC 20

Two component solvent based polyurethane coating having high abrasion resistance and UV stable properties. Polypur TC 20 has excellent resistance to chemicals, solvents, oils and provides an easily cleanable, as well as UV resistant surface.



TDS_Polydeck 2000_GCC_0519

1

APPLICATION INSTRUCTIONS

Surface preparation

The surface should be dry, free of any cement laitance, oil and grease, curing compound and any other contaminants, which may affect the bonding. Light mechanical scabbling, grit/captive blasting or grinding is recommended for cleaning the surface of such contaminants. New concrete surfaces should be 28 days old and the moisture content on the surface must be less than 5%. Refurbishment of existing or old floors must be done with a suitable repair mortar, in order to ensure that the bond between the old substrate and the new flooring system is very good. Surface irregularities and blow holes shall be repaired with Polypoxy BF (Epoxy resin based blow hole filler and skimming mortar) or Polycrete ST (cementitious repair mortar). Alternatively an epoxy resin based scratch coat can be used when repairing larger areas (> 0.5m²). The surface after carrying out the necessary cleaning shall be vacuumed for removing the dust debris left over after the cleaning process.

Priming

Mix part A & part B components of the primer and prime the prepared surface with Polyprime PU @ $4-5m^2/L$. The coating is applied when the primer is dry. However, in all

circumstances, the coating shall be applied within 24 hours of application of the primer. If the primer surface is left open for more than 24 hours, then a fresh coat of primer has to be re-applied. Broadcast Aggregate No. 3 on the primer whilst it is still wet @0.3 kg/m². On ramps and turning areas, the aggregate shall be broadcasted @1.2-1.5 kg/m². After the primer dries off brush away or vacuum out the excess aggregates.

Note

Different grades of non slip aggregates are available as per the degree of slip resistance required.

Topcoat

Polypur TC 20 shall be applied as the abrasion resistant, hard wearing top coat. The coating is supplied in two preweighed packs (resin & hardener) which has to be mixed at site and used. Part mixing is strictly prohibited. Take a suitable container and pour the resin (A) into it. Add the hardener (B) into the resin and mix thoroughly with a slow speed drill with a proprietary paddle mixer for 2-3 minutes, until a homogenous consistency is obtained. Work the mixer round the mixing pan to ensure it scrapes the side and bottom of the pail to ensure all unmixed material is mixed properly. Apply the coating immediately after mixing. For smooth surface finish, apply the coating @5m²/L/coat to achieve a 125 micron DFT and second coat at the same rate if necessary, after the previous coat dries off completely.

COVERAGE	
Polyprime PU	4-5 m²/L
Aggregate No. 3	0.3 kg/m² on driveways 1.2-1.5 kg/m² ramps and turning areas
Polypur TC 20	5 m ² /L for smooth finish for 125 microns DFT

CLEANING

Clean all the tools with Polysolvent immediately after application. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store all material in a cool, covered dry place. Do not expose the pails to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and

humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polyprime PU	5L & 20 L kit
Polypur TC 20	5L & 15L kit
Polypoxy BF	3kg kit
Polycerete ST	25kg bag
Polysolvent	5L & 20L pail
Aggregate No. 3	25kg bag

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Bond strength	Greater than the cohesive strength of good quality concrete	-
Abrasion resistance (taber abraser), [mg]	<50	ASTM D 4060
Touch dry, [hours]	4-5	-
Initial cure, [hours]	6-8	-
Full cure, [days]	7	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Polydeck 4000

Solvent free epoxy non-exposed area coating system

High performance, durable, easy to clean floor and wall coating

CHARACTERISTICS

- ► Excellent resistance to a wide range of chemicals
- Hygienic. Provides an impervious and seamless surface which is easy to clean
- ► Durable and hardwearing
- ► Easy to apply
- ► Available in a wide range of colors
- ➤ Solvent free, therefore odorless and can be applied in confined spaces
- ► Complies with class 2 of surface spread of flame as per BS 476
- ► Non exposed areas
- ► Light to moderate traffic areas







DESCRIPTION

Polydeck 4000 is a versatile, two component solvent free epoxy resin-based floor and wall coating system that provides a durable and impervious coating which is easy to clean and have excellent resistance to a wide range of chemicals. This system may be applicable even in the cases of covered car park with light to moderate traffic.

FIELDS OF APPLICATION

- warehouses and factory floors
- internal lining of storage tanks
- pump & generator rooms
- showrooms
- food and pharmaceutical industries
- parking decks, garages and car wash areas
- workshops and fabrication units.

SYSTEM COMPONENTS

Polyprime EP is a two-component solvent free epoxy resin based primer and sealer for epoxy and polyurethane based coatings and toppings. Polyprime EP can also be applied as a scratch coat with the addition of graded quartz sand.

Polypoxy FC is a high performance, durable, two component solvent free epoxy resin based coating.

OR



Polypoxy SL is a three component, solvent free, epoxy resin based self levelling floor topping which provides a seamless, tough, chemical resistant and hygienic floor surface.

APPLICATION INSTRUCTIONS

The application temperature should be between 5°C to 35°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the coating system is as follows:

Surface preparation

Surface preparation plays a vital role in determining the durability of any floor coating. Therefore, proper care should be taken while executing it. The surface should be dry, free of any cement laitance, oil and grease, curing compound and any other contaminants, which may affect the bonding. Light mechanical scabbling, grit/captive blasting or grinding is recommended for cleaning the surface of such contaminants. New concrete surfaces should be 28 days old and the moisture content on the surface must be less than 5%. Refurbishment of existing or old floors must be done with a suitable repair mortar, in order to ensure that the bond between the old substrate and the new flooring system is very good. Surface irregularities and blow holes shall be repaired with Polypoxy BF (Epoxy resin based blow hole filler and skimming mortar) or polycrete ST (cementitious repair mortar). Alternatively, an epoxy resin based scratch coat can be used

TDS_Polydeck4000_GCC_0720

when repairing larger areas (> 0.5m2). The surface should be vacuumed after carrying out the necessary cleaning for removing the dust debris left over after the cleaning process.

Priming

Prime the prepared surface with Polyprime EP @ 4-5m2/L. The coating is applied when the primer is dry. However, in all circumstances, the coating shall be applied within 24 hours of application of the primer. If the primer surface is left open for more than 24 hours, then a fresh coat of primer has to be reapplied.

Mixing - Polypoxy FC

Mix part A (resin) and part B (hardener) separately for 1 minute using a slow speed drill fitted with a paddle. Then add Part B into Part A and mix thoroughly for 2 - 3 minutes to achieve uniform consistency. Apply immediately after mixing.

Mixing - Polypoxy SL

POLYPOXY SL is supplied in three pre-weighed packs (Resin, hardener and fillers). The components are just to be mixed at site and used. However, part mixing is strictly prohibited. Take a suitable container and pour the resin (A) into it. Add the hardener (B) into the resin and mix thoroughly with a paddle mixer.

Use of a slow speed drill is recommended to reduce the formation of air bubbles. Then slowly add the filler (C) into the container and mix thoroughly for a few minutes.

Application – Polypoxy FC

Polypoxy FC can be applied using a brush/roller/air less spray/ squeegee the product can also be poured and spread evenly on the floor with a squeegee. The coating will then be finished by rolling the surface with a roller. When the first coat achieves initial cure (i.e. after 24hours) apply second coat at right angles to the first

After application the coating must be back rolled to reduce surface irregularities and improve bonding. Care should be taken to ensure that a continuous film is achieved. For a non slip finish, broadcast non slip Aggregate No 3 into the primer coat or first coat of Polypoxy FC @ $0.3 \, \text{kg/m}^2$ and remove excess prior to application of next coat.

Application – Polypoxy SL

Ensure sufficient labor and material is available at site to ensure a smooth continuity of the application of the flooring. Apply the Polypoxy SL topping, by pouring on to the primed surface and spread with a steel notched trowel to achieve a 0.75mm to 7mm seamless topping depending on the grade being used. Once the material is evenly spread, continuous spiking with a spiked roller is to be done to remove all entrapped air. Spiking adjacent layers is recommended to be done at 50% overlaps.

Cleaning

Tools and equipment should be cleaned immediately with Polysolvent. Hardened materials can be removed mechanically only.

COVERAGE

Polypoxy FC - 4 m2/L per coat for 250 microns Dry Film Thickness on smooth surface. Number of coats shall be determined as per the required final thickness. Polypoxy SL - $1L/mm/m^2$

STORAGE & SHELF LIFE

Store all material in a cool, covered dry place. Do not expose the pails to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY		
Polyprime EP	5L & 15L kit	
Polypoxy FC	5L & 15L kit	
Polypoxy SL 20	15L Kit	
Polypoxy SL 40	20L kit	
Polypoxy SL 50	20L kit	
TECHNICAL S	PECIFICATION -	POLYPRIME EP
PROPERTIES.	VALUES	TEST STANDARDS

ILCITITIONE STEE	IIICAIIOII -	I OLIT KIML LI
PROPERTIES	VALUES	TEST STANDARDS
Colour	Amber	
Solid content, [%]	100	ASTM D 1644
Density, [g/cc]	1.05±0.05	ASTM D 1475
Application life, [minutes]	30	
Initial cure, [hours]	6-8	
Bond strength	Greater than the cohesive strength of concrete	ASTM D 4541
Application temp, [°C]	5 to 35	

TECHNICAL SPECIFICATION - POLYPOXY FC

PROPERTIES	VALUES	TEST STANDARDS
Colour	Grey (other colours availd upon request	
Density, [g/cc]	1.5±0.05	ASTM D 1475
Solid content, [%]	100	ASTM D 2369
Pot life @ 30°C, [minutes]	30	ASTM D 2471
Touch dry, [hours]	6	
Over coating time, [hours]	24	
Compressive strength		
@7 days, [N/mm²]	> 65	ASTM C 579
Flexural strength		
@7 days, [N/mm²]	> 19	ASTM C 580
Tensile strength		
@7 days, [N/mm²]	> 15	ASTM C 307
Bond strength		
@7 days, [N/mm²]	> 2.5	ASTM D 4541
Abrasion resistance,		
[100cycles] [mg]	<50	ASTM D 4060
Initial cure, [hours]	24	
Full cure, [days]	7	
Shore D Hardness	80±5	
Application temperature, [°C]	5 to 35	
All values given are subject to	5-20% variation	1

All values given are subject to 5-20% variation

TECHNICAL SPECIFICATION - POLYPOXY SL20		
PROPERTIES	VALUES	TEST STANDARDS
Density, [g/cc]	1.75±0.05	ASTM D 1475
Finish	Glossy	
Compressive strength @7days, [N/mm²]	> 70	ASTM C 579
Flexural strength @7days, [N/mm²]	> 30	ASTM C 580
Pot life [mins @ 30°C]	60	ASTM D 2471
Initial cure, [hours]	24	=
Full cure, [days]	7	-
Abrasion resistance, [mg]	<50	ASTM D 4060
Application temperature, [°C]	5 to 35 -	
Chemical resistance	Resistant	ASTM D 543
111 1 5 7 000 1		

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Solvent free epoxy resin primer and sealer

Two component solvent free epoxy resin based primer and sealer for epoxy and polyurethane based coatings and toppings.



CHARACTERISTICS

- ► Solvent free
- Low viscosity
- Easy to apply by brush, roller, squeegee, airless spray
- Does not Contain Asbestos, Chromated copper arsenate and Lead







DESCRIPTION

Polyprime EP is a two component solvent free epoxy resin based primer and sealer for epoxy and polyurethane based coatings and toppings. Polyprime EP can also be applied as a scratch coat with the addition of graded quartz sand.

FIELDS OF APPLICATION

- epoxy and polyurethane resin based car park coatings and toppings
- epoxy and polyurethane resin based wall & floor coating
- epoxy and polyurethane resin based self leveling system
- epoxy and polyurethane based screeds
- as a scratch coat for floors after mixing with graded quartz sand

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit-Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface preparation

Ensure that the concrete floor is 28 days old and the surface moisture content less than 5% prior to the application of the primer. Clean the surface of all dust, dirt, degradable type of curing compound, oil and grease, cement laitance and other contaminants which will affect the bonding. Captive/shot blasting and grinding of the concrete surface is recommended for cleaning the surface. Cracks, blow holes and surface imperfections should be repaired with Polypoxy BF or Polycrete ST (repair mortar). For larger areas, a scratch coat can be applied. The scratch coat can be prepared by mixing Polyprime EP with Aggregate No. 8. The scratch coat can be applied by a notched trowel.



TDS Polyprime EP GCC 0322

Mixing

Pour Part B into the Part A pail and mix thoroughly with a mixing paddle for 1-2 minutes till a homogenous and uniform consistency is achieved. It is always recommended to mix a complete kit at a time. However, for small areas, part mixing may be carried out by employing proper weight measures.

Application

The mixed primer shall be applied within the working time of the product. The primer may be applied by brush, roller or squeegee. Polyprime EP shall be applied at a coverage rate of 4-5 m²/L. The coating is applied when the primer is dry. However, in all circumstances, the coating shall be applied within 24 hours of application of the primer. If the primer surface is left open for more than 24 hours, then a fresh coat of primer has to be re-applied.

COVERAGE

Smooth finish

 $5m^2/L$

CLEANING

Clean all equipments with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store the material in a cool, covered dry place. Do not expose the pails to direct sunlight and keep away from all

Quality for Professionals

sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as rubber gloves, safety goggles and face mask should be worn when handling the product. Treat any splashes to the skin or eyes with copious amount of fresh water. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polyprime EP	5L & 15L kit
Polypoxy BF	3kg kit
Polycrete ST	25kg bag
Aggregate No. 8	25kg bag
Polysolvent	5L & 20L pails

^{*} Refer to website for TDS

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Color	Amber	-
Solid content, [%]	100	ASTM D 1644
Density, [g/cc]	1.05±0.05	ASTM D 1475
Application life, [Minutes]	30	
Initial cure, [hours]	6-8	
Bond strength	Greater than the	ASTM D 4541

of concrete

5 to 35

All values given are subject to 5-10% tolerance

Application temp, [°C]

TECHNICAL CRECIEICATION

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Solvent free epoxy resin primer and sealer

Primer and sealer coat for polyurethane based coatings and toppings.

CHARACTERISTICS

- ► Solvent free
- Low viscosity
- Easy to apply by brush, roller, squeegee, airless spray
- Colorless







DESCRIPTION

Polyprime PU is a two component solvent free epoxy resin based primer and sealer coat for polyurethane based coatings and toppings. Polyprime PU can also be applied as a scratch coat with the addition of graded quartz sand.

FIELDS OF APPLICATION

Used as a primer and sealer coat for:

- Polyurethane resin based car park coatings and toppings
- Polyurethane resin based wall & floor coating
- Polyurethane resin based self leveling system
- Polyurethane screeds
- As a scratch coat for floors after mixing with graded quartz sand

APPLICATION INSTRUCTIONS

Surface preparation

The concrete should be minimum 28 days old and the surface moisture content less than 5% prior to the application of the primer. Clean the surface of all dust, dirt, degradable type of curing compound, oil and grease, cement laitance and other contaminants which will affect the bonding. Captive/shot blasting and grinding of the concrete surface is recommended for cleaning the surface. Cracks, blow holes and surface imperfections should be repaired with Polypoxy BF or Polycrete ST (repair mortar). For larger areas, a scratch coat can be applied. The scratch coat can be prepared by mixing the Polyprime PU with Aggregate No. 8. The scratch coat can be applied by a notched trowel.



TDS Polyprime PU GCC 0519

Mixing

Pour Part B into the Part A pail and mix thoroughly with a mixing paddle for 1-2 minutes till a homogenous and uniform consistency is achieved. It is always recommended to mix a complete kit at a time. However, for small areas, part mixing may be carried out by employing proper weight measures.

Application

The mixed primer shall be applied within the working time of the product. Pour the mixed primer on the floor and spread it uniformly with a squeegee. Depending on the type of surface finish required, Polyprime PU shall be applied at a coverage rate of 4-5 m²/L. The coating is applied when the primer is dry. However, in all circumstances, the coating shall be applied within 24 hours of application of the primer. If the primer surface is left open for more than 24 hours, then a fresh coat of primer has to be re-applied.

COVERAGE

Smooth finish

 $5 \text{ m}^2/L$

CLEANING

Clean all equipments with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store the material in a cool, covered dry place. Do not expose the pails to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as rubber gloves, safety goggles and face mask should be worn when handling the product. Treat any splashes to the skin or eyes with copious amount of fresh water. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polyprime PU	5L & 20 L kit
Polypoxy BF	3kg kit
Polycrete ST	25kg bag
Aggregate No. 8	25kg bag
Polysolvent	5L & 20L pails

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Color	Amber	-
Density, [g/cc]	1.10±0.05	ASTM D 1475
Application life, [mins]	30	
Initial cure, [hrs]	6 to 8	
Bond strength	Greater than the cohesive strength of concrete	ASTM D 454
Application temp, [°C]	5 to 35	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Epoxy repair putty and blow hole filler

Solvent free, epoxy resin based repair putty and mortar for concrete surfaces.



CHARACTERISTICS

- Thixotropic. Can be applied on vertical surfaces
- Good resistance to acids, alkalis, hydrocarbon fuels, oil and grease, solvents and sea water
- High strength
- Can be trowelled to a smooth finish
- Creamy consistency, easy to use





DESCRIPTION

Polypoxy BF is a two component, solvent free, epoxy resin based repair putty and mortar for concrete surfaces. The epoxy putty consists of graded fillers and non sagging agents which makes it ideal for application on vertical surfaces. Polypoxy BF is designed for filling of blow holes, cracks and minor imperfections on concrete surfaces.

FIELDS OF APPLICATION

- Concrete surfaces: Filling of blow holes, cracks, and surface imperfections up to 5mm
- As a skim coat/filler on prepared floors prior to application of finish coatings and screeds
- As Concrete repair: Repairing damaged concrete, crack filling, leak proofing on horizontal, vertical and over head surface
- As jointing compound: Can be used to join Pre cast concrete/GRC structures
- As a bedding material: Can be used for fixing tiles on heavy duty areas, bedding bridge beams or bridge bearing and for grouting
- As a bonding agent: It bonds to almost all rigid surfaces
- As a mould: It can be moulded to any shape

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit-Low-emitting Materials (for the VOC content)

APPLICATION INSTRUCTIONS

Surface preparation

Clean the concrete surface of all loose particles, laitance, dust, oil, grease, paint etc. Grit/captive blasting and



TDS Polypoxy BF GCC 0322

mechanical grinding of the concrete floor is recommended for removing all surface contaminants.

Mixing

Polypoxy BF Part A and Part B shall be mixed thoroughly using a proprietary paddle mixer fitted to a slow speed drill till a uniform color and consistency is achieved. It is recommended to mix an entire kit at a time. However, for small repairs, part mixing can be done provided both the parts are accurately measured by weight.

Application

Application can be carried out by a steel trowel or putty knife or scraper. Press firmly the mixed mortar into the area to be filled to ensure proper adhesion and full contact. The epoxy putty shall be applied at a maximum thickness of 5mm in one layer. Additional layers should be applied after the applied mortar achieves its initial cure. The area repaired with Polypoxy BF can be over-coated with any epoxy or polyurethane coating after it achieves its initial cure.

CLEANING

Clean all the tools with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

COVERAGE

Polypoxy BF

1 L/m²/mm thickness

Quality for Professionals

STORAGE & SHELF LIFE

The pails shall be stored in a covered and dry area. In tropical climates the product should be stored in an airconditioned environment. The shelf life of the product in unopened condition is 12 months from the date of manufacture. Exposure to sunlight, UV, sources of heat and humidity will result in the deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and safety goggles shall be worn when handling the product. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polypoxy BF	3kg kit
Polysolvent	5L & 20L pails

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Solid content,[%]	100	ASTM D 644
Density, [g/cc]	1.5±0.05	ASTM D 475
Color & appearance	grey/off white paste	-
Application life, [mins]	60	
Compressive strength @7 days, [N/mm²]	>60	ASTM C 579
Initial cure [hrs]	8	-
Full cure [days]	7	-
Application thickness [mm/layer]	0-5	-
Application temp, [°C]	5 to 35	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Epoxy resin based chemical and abrasion resistant screed

Solvent free, non-shrink mortar screed to provide a heavy duty topping for industrial floors.



CHARACTERISTICS

- ► High Impact and abrasion resistance
- High compressive, flexural and tensile strength
- Good resistance to chemicals
- Non shrink
- Non tainting
- Solvent free







DESCRIPTION

Polypoxy is a solvent free, non-shrink, epoxy resin based mortar screed. The epoxy screed has excellent mechanical and abrasion resistance properties and is resistant to a wide variety of chemicals. This system is designed to provide a heavy duty topping for industrial floors. The screed can be applied in thicknesses from 4mm to 20mm in a single lay.

FIELDS OF APPLICATION

Used to provide a heavy duty floor screed for:

- chemical plants & factories
- warehouses & workshops
- dairies & food processing plants
- heavy engineering industrial floors
- metal treatment plants
- substations & battery rooms

APPLICATION INSTRUCTIONS

Surface preparation

Clean the surface of all dust, dirt, oil & grease, cement laitance and all loosely adhering particles. New concrete surface shall be at least 28 days old and the surface moisture content less than 5%. Captive/grit blasting and grinding is recommended for the most effective surface preparation. Surface irregularities and blow holes shall be repaired with Polypoxy BF (Epoxy resin based blow hole filler and skimming mortar) or Polycrete ST (cementitious repair mortar). Alternatively an epoxy resin based scratch coat can be used when repairing larger areas (> 0.5m²). The surface after carrying out the necessary cleaning shall



TDS Polypoxy GCC 0519

be vacuumed for removing the dust debris left over after the cleaning process.

Priming

The surface shall be primed with a solvent free epoxy primer (Polyprime EP) @ 4-5 m²/L.

Mixing

Mix part A and B separately for 2 minutes using a heavy duty slow speed drill (300-400rpm) fitted with a spiral mixing paddle. Pour Part B (hardener) and Part A (base) into a separate container and mix well for a few minutes. Add Part C (filler) slowly to the mixed base and hardener and continue mixing for further 3 – 5 minutes until a uniform and homogenous lump free consistency is achieved. As the products are supplied in pre-weighed packs, part mixing is not at all recommended, as the cured product will not achieve its full properties even if there is a small variation in the mixing proportions.

Application

The epoxy screed shall be applied immediately after mixing within its working time. Discharge the mixed mortar from the mixer and place on the floor when the primer is still in a tacky condition. Spread and compact the mortar with a wooden trowel to get a uniform thickness and complete the application with a steel trowel.

CLEANING

Clean all tools immediately after use with Polysolvent. Hardened materials can be removed mechanically only.

COVERAGE	
Polypoxy	1L/m ² /mm thickness
Polyprime EP	4-5 m ² /L

STORAGE & SHELF LIFE

Store in a dry, cool and shaded area. Protect from sunlight, frost and high humidity. In tropical climates, store the material in air conditioned area at less than 25°C. The shelf life of the product is 12 months if stored as per recommendations. Exposure to heat and high humidity will result in the premature deterioration of the product and reduce its shelf life considerably.

DISPOSAL

Allow the waste to cure. Use licensed waste disposal contractor and consult the local authorities when disposing.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and safety goggles should always be worn when handling the product. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polypoxy	10L kit, wt 20 kg#
Polyprime EP	5L & 15L kit
Polypoxy BF	3kg kit
Polycrete ST	25kg
Polysolvent	5L & 20L pails

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Density, [g/cc]	1.95±0.05	ASTM D 1475	
Application life, [minutes]	>60	-	
Compressive Strength @7 days, [N/mm²]	>80	ASTM C 579	
Flexural strength, @7 days, [N/mm²]	>30	ASTM C 580	
Tensile Strength, @7 days, [N/mm²]	>12	ASTM C 307	
Shear bond strength @7 days, [N/mm²]	> 20	ASTM D 882	
Abrasion resistance, [mg]	< 50	ASTM D 4060	
Impact resistance from a height of 2m	No Indention		
Chemical resistance	pH 2.0 to 11.5	ASTM D 543	
Initial cure, [hours]	16-18	-	
Full cure, [days]	7	-	
Application temperature, [°C]	5 to 35	-	
Service temperature, [°C]	5 to 70	-	

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Epoxy resin based self levelling floor topping

Seamless, tough, chemical resistant and solvent free self levelling floor topping



CHARACTERISTICS

- Self Levelling
- Good resistance to a wide range of chemicals.
- Seamless floor, which helps in keeping the microbial count low
- Provides a hygienic floor which can be cleaned easily
- Provides a good abrasion resistance and dense, impervious flooring
- ▶ 100% reactive system totally free of solvents







DESCRIPTION

Polypoxy SL 20 is a three component, solvent free, epoxy resin based self levelling floor topping which provides a seamless, tough, chemical resistant and hygienic floor surface. It can be applied in the thickness of 1mm to 4mm, giving a glossy floor finish.

FIELDS OF APPLICATION

Used to provide a heavy duty floor screed for:

- laboratories
- plant room for pharmaceutical and health care product manufacturing units
- operation theatres
- food & beverage manufacturing industries
- light industrial plants

APPLICATION INSTRUCTIONS

Surface preparation

Clean the surface of all dust, dirt, oil & grease, cement laitance and all loosely adhering particles. New concrete surface shall be at least 28 days old and the surface moisture content less than 5%. Captive/grit blasting and grinding is recommended for the most effective surface preparation. Surface irregularities and blow holes shall be repaired with Polypoxy BF (Epoxy resin based blow hole filler and skimming mortar) or Polycrete ST (cementitious repair mortar). Alternatively an epoxy resin based scratch coat can be used when repairing larger areas ($> 0.5 \text{m}^2$).



TDS Polypoxy SL 20 GCC 0519

The surface after carrying out the necessary cleaning shall be vacuumed for removing the dust debris left over after the cleaning process.

Priming

The surface shall be primed with Polyprime EP @ 4-5 m²/L. For highly porous substrates, a 2nd coat may be required. The coating is applied when the primer is dry. However, in all circumstances, the coating shall be applied within 24 hours of application of the primer. If the primer surface is left open for more than 24 hours, then a fresh coat of primer has to be re-applied.

Mixing

Polypoxy SL 20 is supplied in three pre-weighed packs (Resin, hardener and fillers). The components are just to be mixed at site and used. However, part mixing is strictly prohibited. Take a suitable container and pour the resin (A) into it. Add the hardener (B) into the resin and mix thoroughly with a paddle mixer. Use of a slow speed drill is recommended to reduce the formation of air bubbles. Then slowly add the filler (C) into the container and mix thoroughly for a few minutes.

Application

Ensure sufficient labor and material is available at site to ensure a smooth continuity of the application of the

Quality for Professionals

2

flooring. Apply the Polypoxy SL 20 topping, by pouring on to the primed surface and spread with a steel notched trowel to achieve a 1mm to 4mm seamless topping. Once the material is evenly spread, continuous spiking with a spiked roller is to be done to remove all entrapped air. Spiking adjacent layers is recommended to be done at 50% overlaps.

CAUTION

- do not use below 5°C
- over troweling is to be avoided
- Polypoxy SL 20 should not be applied to surfaces which has rising dampness and there is a phenomenon of reverse osmosis. In addition to that, application is always recommended to be carried out when the atmospheric temperature is low.

CLEANING

Clean the equipments with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

MAINTENANCE

As a good maintenance practice and increasing the life of the flooring, a regular cleaning of the floor with a light cleaning agent is suggested. However, steam cleaning should be avoided.

COVERAGE	
Polypoxy SL 20	1L/m²/mm thickness
Polyprime EP	4-5 m ² /L

STORAGE & SHELF LIFE

Store in a dry, cool and shaded area. Protect from sunlight, frost and high humidity. In tropical climates, store the material in air conditioned area at less than 25°C. The shelf life of the product is 12 months if stored as per recommendations. Exposure to heat and high humidity will result in the premature deterioration of the product and reduce its shelf life considerably.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Density, [g/cc]	1.75±0.05	ASTM D 1475	
Finish	Glossy		
Compressive strength @7days, [N/mm²]	> 70	ASTM C 579	
Flexural strength @7days, [N/mm²]	> 30	ASTM C 580	
Pot life [mins @ 30°C]	60	ASTM D 2471	
Initial cure, [hours]	24	-	
Full cure, [days]	7	-	
Abrasion resistance, [mg]	< 50	ASTM D 4060	
Application temperature, [°C]	5 to 35	-	
Chemical resistance	Resistant	ASTM D 543	

All values given are subject to 5-10% tolerance

SUPPLY	
Polyprime EP	5L & 15L kit
Polypoxy BF	3kg kit
Polycrete ST	25kg bag
Polypoxy SL 20	15L kit
Polysolvent	5L & 20L pail

#Application of the system at a higher thickness will result in excessive air entrappment if appliation is not done properly.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $+23^{\circ}\text{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.



Polypoxy SL 40

Epoxy resin based self levelling floor topping

Seamless, tough, chemical resistant and solvent free self levelling floor topping



CHARACTERISTICS

- ▶ Self Levelling
- ► Good resistance to a wide range of chemicals.
- ➤ Seamless floor, which helps in keeping the microbial count low
- Provides a hygienic floor which can be easily cleaned easily
- Provides a good abrasion resistance and dense, impervious flooring
- ▶ 100% reactive system totally free of solvents







DESCRIPTION

Polypoxy SL 40 is a three component, solvent free, epoxy resin based self levelling floor topping which provides a seamless, tough, chemical resistant and hygienic floor surface. It can be applied in the thickness of 2mm to 4mm, giving a semi matt floor finish.

FIELDS OF APPLICATION

Used to provide a heavy duty floor screed for:

- laboratories
- plant room for pharmaceutical and health care product manufacturing units
- operation theatres
- food & beverage manufacturing industries
- light industrial plants
- warehouses

APPLICATION INSTRUCTIONS

Surface preparation

Clean the surface of all dust, dirt, oil & grease, cement laitance and all loosely adhering particles. New concrete surface shall be at least 28 days old and the surface moisture content less than 5%. Captive/grit blasting and grinding is recommended for the most effective surface preparation. Surface irregularities and blow holes shall be repaired with Polypoxy BF (Epoxy resin based blow hole filler and skimming mortar) or Polycrete ST (cementitious



TDS_Polypoxy SL 40_GCC_0519

repair mortar). Alternatively an epoxy resin based scratch coat can be used when repairing larger areas ($> 0.5 \text{m}^2$). The surface after carrying out the necessary cleaning shall be vacuumed for removing the dust debris left over after the cleaning process.

Priming

The surface shall be primed with Polyprime EP @ 4-5 m 2 /L. For highly porous substrates, a 2^{nd} coat may be required. The coating is applied when the primer is dry. However, in all circumstances, the coating shall be applied within 24 hours of application of the primer. If the primer surface is left open for more than 24 hours, then a fresh coat of primer has to be re-applied.

Mixing

Polypoxy SL 40 is supplied in three pre-weighed packs (Resin, hardener and fillers). The components are just to be mixed at site and used. However, part mixing is strictly prohibited. Take a suitable container and pour the resin (A) into it. Add the hardener (B) into the resin and mix thoroughly with a paddle mixer. Use of a slow speed drill is recommended to reduce the formation of air bubbles. Then slowly add the filler (C) into the container and mix thoroughly for a few minutes.

og_ZQT

Application

Ensure sufficient labor and material is available at site to ensure a smooth continuity of the application of the flooring. Apply the Polypoxy SL 40 topping, by pouring on to the primed surface and spread with a steel notched trowel to achieve a 2mm to 4mm seamless topping. Once the material is evenly spread, continuous spiking with a spiked roller is to be done to remove all entrapped air. Spiking adjacent layers is recommended to be done at 50% overlaps.

CAUTION

- do not use below 5°C
- over troweling is to be avoided
- Polypoxy SL 40 should not be applied to surfaces which has rising dampness and there is a phenomenon of reverse osmosis. In addition to that, application is always recommended to be carried out when the atmospheric temperature is low.

CLEANING

Clean the equipments with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

MAINTENANCE

As a good maintenance practice and increasing the life of the flooring, a regular cleaning of the floor with a light cleaning agent is suggested. However, steam cleaning should be avoided.

COVERAGE

Polypoxy SL 40	1L/m²/mm thickness	
Polyprime EP	4-5 m ² /L	

STORAGE & SHELF LIFE

Store in a dry, cool and shaded area. Protect from sunlight, frost and high humidity. In tropical climates, store the material in air conditioned area at less than 25°C. The shelf life of the product is 12 months if stored as per recommendations. Exposure to heat and high humidity will result in the premature deterioration of the product and reduce its shelf life considerably.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

TECHNICAL SPECIFICATION			
PROPERTIES	VALUES	TEST STANDARDS	
Density, [g/cc]	1.85±0.05	ASTM D 1475	
Finish	Semi matt		
Compressive strength @7days, [N/mm²]	> 70	ASTM C 579	
Flexural strength @7days, [N/mm²]	> 30	ASTM C 580	
Pot life [minutes @ 30°C]	60	ASTM D 2471	
Initial cure, [hours]	24	-	
Full cure, [days]	7	-	
Abrasion resistance, [mg]	<50	ASTM D 4060	
Application temp. [°C]	5 to 35		

All values given are subject to 5-10% tolerance

SUPPLY	
Polyprime EP	5L & 15L kit
Polypoxy BF	3kg kit
Polycrete ST	25kg bag
Polypoxy SL40	20L kit
Polysolvent	5L & 20L pail

#Application of the system at a higher thickness will result in excessive air entrappment if appliation is not done properly.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.





Mineral based dry shake floor hardener

Forms a monolithic bond when applied over freshly poured concrete surface

CHARACTERISTICS

- Provides a hard and durable surface topping on
- Reduces dusting and resists oil and grease penetration which makes it easy to clean
- Premixed and ready to use powder
- Ideal for interior and exterior use
- Available in a range of colours
- Forms a monolithic bond with concrete







DESCRIPTION

Polyhard is a ready to use factory blended cementitious powder, which has been formulated to provide hard wearing surface when applied as a dry shake powder over freshly floated concrete surface. Polyhard contains specially selected aggregates with excellent abrasion and wear resistance along with cementitious binders, plasticizers and admixtures to provide a tough & durable floor.

FIELDS OF APPLICATION

Used for providing a high wear resistant and antiskid surface to newly laid concrete surface by the dry shake method. It finds its best use in indoor and outdoor applications such as:

- industrial warehouses & factories
- garages
- ramps and loading bays
- power stations
- aircraft hangers

SPECIFICATION CLAUSE

Floors should be treated with Polyhard - a cementitious dry shake floor hardener containing non metallic, rust free aggregates spread @ 3 –5 kg/m² applied in accordance with manufacturer's instructions.

APPLICATION INSTRUCTIONS

Surface preparation

Calculate the total quantity of Polyhard to be used, divide and mark the area into suitable bays and set out the bags



TDS Polyhard GCC 0519

evenly around the perimeter of the application area. Make sure that the required wooden hand floats and power floats are on site and ready to use.

Placing concrete

With the least possible handling, deposit concrete between previously placed screed points. Move concrete into place with square tipped shovel or other solid bladed tools. Vibrators when used should be inserted vertically and should not be used to move concrete. The concrete once placed is further leveled and consolidated with wooden or hand floats. Remove any bleed water, which is present on the surface.

Applying the first shake

Transfer Polyhard powder from the bags to pails of a size convenient for handling by the person walking on the freshly floated surface. When the concrete has set enough to leave a 3 – 6 mm footprint on the surface, start broadcasting 2/3rd of the quantity evenly over the surface. As soon as the material darkens, start working on the surface with wooden float. Make sure that the surface is not overworked which results in excessive moisture surfacing.

Applying the second shake

As the floating proceeds, immediately follow the process by broadcasting, at right angles to the initial broadcast, the

2

balance 1/3rd of the quantity set apart. Once the material darkens, float the surface with a power float bringing the moisture completely through the surface. In case of heavy duty application the first broad cast will be done only with the half the quantity. This is followed by two separate broadcasts each with 1/4 the quantity and at right angles to each other.

Bay edges

Extreme care and attention should be given at the bay edges and corners as they endure heavy wear and tear. Bay edges are usually reinforced with one of the following ways: Immediately after the leveling of the fresh concrete, sprinkle by hand @5 kg/m² in strips of 10cm width along the bay edges (i.e., 0.5 kg/lm).

Immediately after the leveling of the fresh concrete, remove a wedge of concrete 10mm deep at the edges. Then apply a stiff mass of Polyhard mixed with clean water. This must be fully compacted to the base concrete. These reinforced areas will be further strengthened when subsequent full application is completed.

CAUTION

Timing of the broadcast is very important in the application of Polyhard. Care should be taken that adequate labor, material and machinery is available to complete the whole area while the moisture is still available for the material to fully react and form the required finish. Conversely, full benefit will not be achieved if the material is applied too early when bleed water is still present. NEVER APPLY ADDITIONAL WATER TO AID FINISHING as this could prove detrimental to the whole system and also result in a patchy surface while using colored Polyhard.

Proper curing of the surface is very important for the achievement of the required physical properties of the finished floor. It is recommended to use Polycure AC* for curing. Saline or brackish water should not be used. Please refer to the detailed method statements for more details on application.

STORAGE & SHELF LIFE

Store all material in a cool, covered dry place. Do not expose the pails to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. Polyhard has a shelf life of 12 months when stored in cool and dry conditions. Extreme temperature, excessive humidity and over exposure to UV will result in the reduction of shelf life.

HEALTH & SAFETY

Heavy traffic

Avoid contact with skin and eyes. Avoid inhaling the product as it could result in irritations in the respiratory system. Wear suitable gloves and eye protection. Please refer to our Material safety data sheet for further details.

COVERAGE	
Light traffic	3kg/m ²
Medium traffic	5kg/m ²

7kg/m²

BASE CONCRETE REQUIREMENT		
Minimum compressive strength, [N/mm²]	30	
Minimum cement content, [kg /m³]	300	
Minimum slump, [mm]	75 to 90	
Maximum air content, [%]	3	

Completely devoid of chloride admixtures and salt contaminated aggregates

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	
Color	Grey (other colours available on request)	
Density, [g/cc]	1.8±0.05	
Compressive strength, @ 28 days, [N/mm²]	70	
Moh hardness	7	
Abrasion resistance, [%]	220 of normal concrete	
Standards	BS 1881 Part 116, ASTM C 779 – 89	

All values given are subject to 5-10% tolerance

SUPPLY	
Polyhard	25kg bags
Polycure AC	20L & 200L drum

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



pur TG 20

UV stable, polyurethane car park deck coating

Two component high quality polyurethane car park deck coating system for both internal and external areas.

CHARACTERISTICS

- ► Highly durable and UV stable
- ► Excellent abrasion resistance
- Good chemical resistance
- Can be applied on many different substrates and on cured epoxy systems
- Excellent surface finish with different colors
- Easy to apply







DESCRIPTION

Polypur TC 20 is a two component high quality UV stable polyurethane car park deck coating system. The coating provides a seamless, abrasion resistant floor coating system for both internal and external areas.

FIELDS OF APPLICATION

Polypur TC 20 is designed as a protective and wear resistant coating for new and existing trafficked areas such as:

- car park decks and ramps
- plant rooms
- trafficable flat roofs
- terraces and balconies
- industrial floors
- chemical processing areas
- factory ware houses

APPLICATION INSTRUCTIONS

Surface preparation

The surface should be dry, free of any cement laitance, oil and grease, curing compound and any other contaminants, which may affect the bonding. Light mechanical scabbling, grit/captive blasting or grinding is recommended for cleaning the surface of such contaminants. New concrete surfaces should be 28 days old and the moisture content on the surface must be less than 5%. Refurbishment of existing or old floors must be done with a suitable repair mortar, in order to ensure that the bond between the old



TDS Polypur TC 20 GCC 0519

substrate and the new flooring system is very good. Surface irregularities and blow holes shall be repaired with Polypoxy BF (Epoxy resin based blow hole filler and skimming mortar) or Polycrete ST (cementitious repair mortar). Alternatively an epoxy resin based scratch coat can be used when repairing larger areas (> 0.5m²). The surface should be vacuumed after carrying out the necessary cleaning for removing the dust debris left over after the cleaning process.

Priming

Prime the prepared surface with Polyprime PU @ 4-5m²/L. The coating is applied when the primer is dry. However, in all circumstances, the coating shall be applied within 24 hours of application of the primer. If the primer surface is left open for more than 24 hours, then a fresh coat of primer has to be re-applied. Broadcast Aggregate No. 3 on the primer whilst it is still wet @0.3 kg/m². On ramp and turning areas, the aggregate shall be broadcasted @1.2-1.5 kg/m². After the primer dries off brush away or vacuum out the excess aggregates.

Polypur TC 20 shall be applied as the abrasion resistant top coat. This UV resistant coating is supplied in two preweighed packs (resin & hardener). Stir both components

1

2

seperately for a minut to remove any sediments. Slowly add the hardener (B) into the resin (A) and mix thoroughly with a slow speed drill with a proprietary paddle mixer for 2 -3 minutes, until a homogenous consistency is obtained. Work the mixer round the mixing pan to ensure it scrapes the side and bottom of the pail. Once the material is mixed immediately apply the coating with a roller or airless spray at a coverage rate of 5m²/L. If required apply a second coat at the same coverage rate and only after the first coat has dried off completely (24 hours). The coating will achieve its full mechanical properties after 7 days of cure, after which the floor can be subjected to heavy traffic.

NOTE

Different grades of anti-slip aggregates are available as per the degree of slip resistance required.

CLEANING

Clean all the tools with Polysolvent immediately after application. Hardened materials can be removed mechanically only.

COVERAGE	
Polyprime PU	4-5 m ² /L
Aggregate No. 3	0.3 kg/m² on driveways 1.2-1.5 kg/m² on ramps and turning areas
Polypur TC 20	5 m ² /L/coat on smooth surface for 125 microns DFT

DISPOSAL

Allow the waste to cure. Seal it into a suitable container and use licensed waste disposal contractor. Consult the local authorities when disposing

STORAGE & SHELF LIFE

Store all material in a cool, covered dry place. Do not expose the pails to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polypur TC 20	5L & 15L kit
Polyprime PU	5L & 20L kit
Polypoxy BF	3 kg kit
Polycrete ST	25kg bag
Aggregate No. 3	25kg bag
Polysolvent	5L & 20L pail

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Color	grey (other colors available upon reques	st) -
Density, [g/cc]	1.2±0.05	ASTM D 1475
Solid content, [%]	65±2	ASTM D 2369
Abrasion resistance, [mg]	<50	ASTM D 4060
Touch dry, [hours]	4-5	-
Re-coatable, [hours]	24	-
Full cure, [days]	7	-
Chemical resistance	Dilute acids and alka hydrocarbon fuels, so oil, sea water.	,
Application temperature, [°C] 5 to 35	-
Service temperature, [°C]	-20 to 75	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.



Solvent free epoxy resin coating

High performance, durable, easy to clean floor and wall coating





CHARACTERISTICS

- ► Excellent resistance to a wide range of chemicals
- Hygienic. Provides an impervious and seamless surface which is easy to clean
- ► Durable and hardwearing
- ► Easy to apply
- ► Available in a wide range of colors
- ► Solvent free, therefore odorless and can be applied in confined spaces
- Complies with class 2 of surface spread of flame as per BS 476







DESCRIPTION

Polypoxy FC is a versatile, two component solvent free epoxy resin based floor and wall coating that provides a durable and impervious coating which is easy to clean and have excellent resistance to a wide range of chemicals.

FIELDS OF APPLICATION

- warehouses and factory floors
- internal lining of storage tanks
- pump & generator rooms
- showrooms
- food and pharmaceutical industries
- parking decks, garages and car wash areas
- workshops and fabrication units.

ENVIRONMENTAL INFORMATION

Contributes toward satisfying LEED® v4 requirements of the EQ Credit- Low-emitting Materials (for the VOC

APPLICATION INSTRUCTIONS

Surface preparation

Surface preparation plays a vital role in determining the durability of any floor coating. Therefore proper care should be taken while executing it. The surface should be dry, free of any cement laitance, oil and grease, curing compound and any other contaminants, which may affect the bonding. Light mechanical scabbling, grit/captive blasting or grinding is recommended for cleaning the



TDS Polypoxy FC GCC 0322

surface of such contaminants. New concrete surfaces should be 28 days old and the moisture content on the surface must be less than 5%. Refurbishment of existing or old floors must be done with a suitable repair mortar, in order to ensure that the bond between the old substrate and the new flooring system is very good. Surface irregularities and blow holes shall be repaired with Polypoxy BF (Epoxy resin based blow hole filler and skimming mortar) or Polycrete ST (cementitious repair mortar). Alternatively an epoxy resin based scratch coat can be used when repairing larger areas (> 0.5m²). The surface should be vacuumed after carrying out the necessary cleaning for removing the dust debris left over after the cleaning process.

Priming

On most new concrete floors priming may not be required. However for best adhesion, prime the prepared surface with Polyprime EP @ 4-5m²/L. The coating is applied when the primer is dry. However, in all circumstances, the coating shall be applied within 24 hours of application of the primer. If the primer surface is left open for more than 24 hours, then a fresh coat of primer has to be re-applied.

Mixing

Mix part A (resin) and part B (hardener) separately for 1 minute using a slow speed drill fitted with a paddle. Then

Quality for Professionals

add Part B into Part A and mix thoroughly for 2 - 3 minutes to achieve uniform consistency. Apply immediately after mixing.

Application

Polypoxy FC can be applied using a brush/roller/air less spray/squeegee the product can also be poured and spread evenly on the floor with a squeegee. The coating will then be finished by rolling the surface with a roller. When the first coat achieves initial cure (i.e. after 24hours) apply second coat at right angles to the first. After application the coating must be back rolled to reduce surface irregularities and improve bonding. Care should be taken to ensure that a continuous film is achieved. For a non slip finish, broadcast non slip Aggregate No 3 into the primer coat or first coat of Polypoxy FC @ 0.3kg/m² and remove excess prior to application of next coat.

CLEANING

Clean all tools & equiptments with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

COVERAGE

4 m²/L per coat for 250 microns Dry Film Thickness on smooth surface. Number of coats shall be determined as per the required final thickness.

STORAGE & SHELF LIFE

Store all material in a cool, covered dry place. Do not expose the pails to direct sunlight and keep away from all sources of heat. In tropical climatic conditions, the product has to be stored in an airconditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per the recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY	
Polypoxy FC	5L & 15L kit
Polypoxy BF	3kg kit
Polycrete ST	25 kg bag
Polyprime EP	5L & 15L kit
Polysolvent	5L & 20L pail
Aggregate No. 3	25kg bag

TECHNICAL SPECIFICATION		
PROPERTIES	VALUES	TEST STANDARDS
Colour	grey (other colours available upon request	-
Density, [g/cc]	1.5±0.05	ASTM D 1475
Solid content, [%]	100	ASTM D 2369
Pot life @ 30°C, [minutes]	30	ASTM D 2471
Touch dry, [hours]	6	-
Over coating time, [hours]	24	-
Compressive strength @7 days, [N/mm²]	> 65	ASTM C 579
Flexural strength @7 days, [N/mm²]	> 19	ASTM C 580
Tensile strength @7 days, [N/mm²]	> 15	ASTM C 307
Bond strength @7 days, [N/mm²]	> 2.5	ASTM D 4541
Abrasion resistance, [100cycles] [mg]	<50	ASTM D 4060
Initial cure, [hours]	24	-
Full cure, [days]	7	-
Shore D Hardness	80±5	-
Application temperature, [°C]	5 to 35	-

All values given are subject to 5-10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





Line marking paint for roads and parkings

Specially formulated high build line marking paint based on a modified acrylic/chlorinated rubber hybrid.

CHARACTERISTICS

- Quick drying
- ▶ Durable
- Easy to apply
- ► Suitable for use in both internal and external conditions
- ► Good abrasion resistance
- Excellent resistance against oil, alkalis and hydrocarbon fuels
- Good adhesion on most substrates
- Good reflection properties with glass beads







DESCRIPTION

Polypur LMP is a specially formulated high build line marking paint based on a modified acrylic/chlorinated rubber hybrid.

FIELDS OF APPLICATION

Used as a line marking paint on:

- polyurethane resin based car park coatings and
- epoxy resin based car park coatings and toppings
- concrete surfaces
- asphalt car parks
- airport runways
- school playgrounds and sports floors
- kerbs & stair treads
- factory and warehouse floors

APPLICATION INSTRUCTIONS

Surface preparation

Concrete surface: Clean the surface of all dirt, oil & grease and other contaminants. If required wash the area completely with clean water. Allow the surface to dry. Asphalt/Tarmac: Clean the surface of all dirt and other contaminants. The surface can be washed with a detergent followed by rinsing with clean water. Allow the surface to dry. Polyurethane/Epoxy Coated surface: Clean the surface



TDS Polypur LMP GCC 0519

of all dust and other contaminants. For old coated areas use a detergent to clean the dirt followed by thorough rinsing with clean water.

CAUTION

- do not use any solvent for cleaning the surface.
- do not apply the paint if the humidity is > 85% and the dew point is < 3°C since it will prolong the drying time.
- do not apply the paint when rain or sand storm is imminent.

Application

Mix the contents of the pail thoroughly prior to application to remove any sediment. Polypur LMP can be applied with an airless spray, brush or roller. When applying with an airless spray, the tip of the nozzle should be 0.3-0.4mm and applied at a minimum pressure of 2500 psi. Use Polysolvent to thin the coating for the airless spray application. The line marking paint can be applied at a coverage rate of 5 m²/L (200 micron WFT to get a DFT of 120 microns). The second coat if required to build up the thickness can be applied only after the first coat dries off completely (30 minutes @25°C). For superior light reflectivity, proprietary glass beads (<200 microns) can be sprinkled on top of the coating whilst it is still wet.

COVERAGE

Polypur LMP 5 m^2/L for 200 micron WFT/ 120 micron DFT

CLEANING

Clean/flush all equipments with Polysolvent immediately after use. Hardened materials can be removed mechanically only.

STORAGE & SHELF LIFE

Store the material in a cool, covered dry and well ventilated place. Due to its low flash point, extreme care needs to be taken to ensure that the pails are not exposed to direct sunlight and should be kept away from all sources of heat at all times. In tropical climatic conditions, the product has to be stored in an air-conditioned environment and protected from high humidity. The shelf life of the product is 12 months in unopened condition if stored as per recommendations. Exposure to high temperature and humidity will result in considerable deterioration of the product and reduce its shelf life.

HEALTH & SAFETY

As with all construction chemical products, caution should always be exercised. Protective clothing such as rubber gloves, safety goggles and face mask should be worn when handling the product. Treat any splashes to the skin or eyes with copious amount of fresh water. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

SUPPLY		
Polypur LMP	1L & 4L pail	

5L & 20L pail

TECHNICAL SPECIFICATION

Polysolvent

PROPERTIES	VALUES	TEST STANDARDS
Color	Yellow, white & black	-
Finish	Slight sheen	-
Density, [g/cc]	1.45±0.05	ASTM D 1475
Tack free time, [minutes]	10	-
Hard dry, [minutes]	60	-
Minimum over coating [minutes]	30	-
Maximum over coating [minutes]	Indefinite	-
Application temperature, [°C]	5 to 35	-
Application humidity, [%]	< 85	-

All values given are subject to 5- 10% tolerance

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.





05 TILING SOLUTIONS

STANDARD GROUT

CE 33 - COMFORT

Cement based tile grout for filling

FLEX ADHESIVES & GROUTS

CE 47

Ultraepoxy industrial

STANDARD ADHESIVES (POWDER)

CM 9 - COMFORT

General purpose cementitious tile adhesive

CM 11 - UNIVERSAL

Universal polymer modified cementitious tile adhesive

FLEX ADHESIVES

CM 16 - FLEXIBLE

Flexible polymer modified cementitious tile adhesive

CM 17 - SUPER FLEXIBLE

High performance, deformable tile adhesive



CE 33 - COMFORT

CEMENT-BASED TILE GROUT FOR FILLING NARROW AND WIDE JOINTS OF 1 TO 8MM





CHARACTERISTICS

- ► Smooth surface finish
- ► For fine grouting work
- ► New brilliant colours
- ► Suitable for wet areas
- ► Crack resistance
- ► Easy to wash
- Antimicrobial, antibacterial and antifungal









SCOPE OF USE

For filling joints in floor & wall of ceramic, porcelain, mosaic, natural stone, marble & granite indoor and outdoor areas (like balcony, low height cladding). For narrow and wide joints of 1 to 8 mm.

APPLICABLE STANDARDS

Tested according to ANSI A118.6 & EN 13888 as CG2A

SUBSTRATE PREPARATION

The surface and thin-bed mortar, dispersion adhesive or thick-bed mortar must have set sufficiently hard and dry. Scraped joints must first be wetted. In case of tile coverings with a porous or non-scratchproof surface test suitability of CE 33 for grouting.

APPLICATION

Pour Ceresit CE 33 in the measured quantity of cold and clean water and mix with an electric mixer until you obtain a homogenous mixture, free of lumps. 1.05-1.15L water for 5kg of Ceresit CE 33 are required for mixing. Mix again after 3 minutes.

Fill the joints with the Cerecit CE33 mix using a special grout float or rubber squeegee, without leaving any gaps. Wipe over and clean freshly grouted tiles with a damp sponge. Remove the dry film later with a soft cloth. Dampen the freshly grouted joints after 24 hours to prevent surface moisture deficiency. Floor tiles can be walked on after only 24 hours. Use CE 33 only in dry conditions and at temperatures of 5°C to 40°C.

PLEASE NOTE

Differences in the absorbency of the joint flanks (tile edges), different water/cement ratios, different drying rates and moisture



TDS_Ceresit CE33_GCC_0724

levels of the surface can cause discoloration of the joints. When applying CE 33 between 1 and 2mm always assure that the joint will get cured with water for at least 24 hours.

When using different packs of joint mortar, the colour may vary slightly. Therefore make sure to use bags of the same batch number within a building or room.

CE 33 contains cement and reacts with water, producing an alkaline solution. Always protect skin and eyes. In case of contact wash immediately with plenty of water. After eye contact seek medical advice.

Use otherHenkel products when grouting tiles in swimming pools and exposed areas, especially with exposure to chemicals, and for settlement joints. Observe the warnings-, safety - and waste advice given in the safety data sheet.

Kindly contact your local Henkel technical advisor for further assistance.

STORAGE AND SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat, sunlight and moisture. The shelf life is 24 months for 5kg foil bag in its original packaging if stored as per recommendations.

TECHNICAL DATA	
Base	mixture of cements with mineral fillers and polymer modifying agent
Density [g/cc]	approx. 1.12
Mixing ratios	1.05 - 1.15L water per 5kg
Application time [min] Application temperature [°C]	90 5 to 40
Compressive strength in the dry conditions @ 28 days [MPa] After freeze-thaw cycles @ 28 days [MPa]	≥15 [EN 13888] ≥ 15 [EN 13888]
Flexural strength in the dry conditions @ 28 days [MPa] After freeze-thaw cycles @ 28 days [MPa]	≥2.5 [EN 13888] ≥ 2.5 [EN 13888]
Resistance to abrasion [mm³]	≤ 1000 [EN 13888]
Trafficable	after 24 hours
Colours	available in 22 colours
Packaging	5 kg foil bag

Should yo	u need	support	or	advice,	please	consult	our	technical
service								

INDICATIVE CONSUMPTION						
Tile type	Size (mm)	Joint width (mm)	Consumption (kg /m²)			
Mosaic	5/5	1.5 - 2	approx. 0.5			
Tile	5/5	3	approx. 0.8			
Tile	10.8/10.8	2	approx. 0.35			
Tile	15/15	3	approx. 0.38			
Tile	10/20	3	approx. 0.38			

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

CE 47

ULTRAEPOXY INDUSTRIAL

Two-component, chemical-resistant epoxy mortar for installation and grouting of tiles and stones



CHARACTERISTICS

- ▶ Waterproof
- ► Easy application and cleaning
- ► Chemical resistance and mechanical attack
- ► Vertical slip resistance
- ► Internal and external applications

















PRODUCT SCOPE

For the chemically and permanently resistant installation and grouting of ceramic tiles and stones, acid-resistant bricks, split tiles, chipboards, porcelain, clinker slabs and synthetic resin bonded slabs (Agglo marble etc). For installation and grouting ceramic coverings in areas exposed to aggressive substances, e.g. in therapeutic baths, dairies, industrial kitchens, battery rooms, car washes, breweries, silos, animal housing, swimming pools, laboratories, spas, saunas and steam baths. For indoor and outdoor use, in permanently wet area sand brackish water.

APPLICABLE STANDARDS

Tested according to ANSI A118.3

SUBSTRATE PREPARATION

CE 47 adheres to all sound, load-bearing, clean and dry substrates free of substances that may impair adhesion. Prior to grouting, the surface, thin-bed mortar or bedding mortar must have set sufficiently hard and all joints must be uniformly raked to the same depth and width. To ensure a permanent bond with metal, the substrates must be bright metal or coated with an epoxy corrosion inhibitor. Check that the tiles do not present problems of cleaning or surface absorption. Some kinds of tiles (e.g. polished porcelain tiles) and natural stone have rough, microporous surfaces, making them susceptible to staining and very difficult to clean. In this case preliminary application checks should be performed. Avoid using grouts with contrasting or excessively dark colors.

APPLICATION

CE 47 consists of two components supplied in one container. Component A consists of an epoxy resin mixture, siliceous



aggregates and additives. Component B consists of a mixture of organic catalysts.

Mixing

Add the hardener (component B-catalyst) contained in the plastic bag to the resin (component A) and mix with a low speed electric drill and stirrer (approx. 400 rpm) until the mixture is completely free of lumps. Scrape the sides and the bottom of the container, using a steel spatula, to make sure that all the paste is catalyzed. Hand mixing is not recommended. The two parts are pre-batched in their packaging, avoiding, this way, all risk of mixing errors. Do not add water or solvents to improve workability.

Installation of tiles and stones:

CE 47 is applied using the thin-bed method. The notch size of the trowel must be adapted to the respective tile or stone format in accordance with the local norms.

Grouting

Apply the CE 47 mixture with an epoxy grouting board to the dry and clean ceramic coverings, filling the joints completely and without any cavities. Then remove any excess material by skimming it diagonally off the tile surface.

Cleaning and finishing

The grout work must be cleaned and finished while the product is still wet and in any case in the shortest possible time. Take care not to remove product from the joints or leave stains on the tile surface.

TDS Ceresit CE 47 GCC 0325

Use as adhesive

Apply to the substrate using a trowel with suitable notch size, then position the tiles and press firmly into place.

PLEASE NOTE

- The product's pot life and hardening time is strongly dependent on the ambient temperature.
- The ideal temperature for application is between +10 and +40°C. In these conditions the product is an easily workable smooth mortar, with a pot life of about 1 hour. It is ready for foot traffic after 24 hours.
- The white colored product tends to take on an ivory shade over time
- Some kinds of tiles (e.g. polished porcelain tile) and natural stone have rough, microporous surfaces, making them susceptible to staining and very difficult to clean. In this case preliminary test application should be performed. Avoid using grouts with contrasting or excessively dark colors.
- Remove excess product from the tile surface rapidly because once hardened it will have to be removed mechanically, seriously jeopardizing the finished result.
- Do not use for applications not stated on this technical sheet.

SU	JΡ	P	LY

Ceresit CE 47 5 kg (Part A + Part B)

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

TECHNICAL DATA	
Base	Epoxy resin with mineral fillers and additives
Mixed density, [g/cc]	1.8+/-0.05
Mix ratio	92g Part A + 8g Part B
Application temperature,[°C]	10 to 40
Application time at 23°C, [minutes]	≥ 80
Water clean-ability, [minutes]	≥ 80
Sag in vertical	Pass
Initial setting time, [hours]	>2
Final setting time, [days]	≤ 7
Shear bond strength to quarry tiles at 14 days, [Psi]	>1000
Compressive strength at 7 days, [MPa]	>70
Tensile strength at 7 days, [MPa]	≥ 6.85
Linear shrinkage, [%]	≤0.25
Chemical resistance	Resistant
VOC, [g/L]	<50
Standard compliance	ANSI A 118.3

Consumption

- a) Once used as tile adhesive, kg/m 2 /1 mm thick : \sim 1.8
- b) Once used as tile grout

,	•		
Tile size	Tile thickness	Joint width	Amount
in cm	mm	mm	kg/m²
5 / 5	5	4	approx. 1.4
10 / 10	8	4	approx. 1.15
15 / 15	6	6	approx. 0.86
10 / 20	6	6	approx. 0.97
10 / 20	10	8	approx. 2.16
20 / 20	10	8	approx.1.44

All values given are subject to 5-10% tolerance

CM 9 - COMFORT

GENERAL PURPOSE CEMENTITIOUS TILE ADHESIVE

For indoor applications on floors and walls



CHARACTERISTICS

- ▶ Suitable for ceramic, glazed, terracotta and porcelain tiles
- ► For indoor areas
- ► For walls and floors
- ▶ Recommended for periodically wet areas and utility rooms
- ► Easy workability
- ▶ Does not contain asbestos, chromated copper arsenate & lead







PRODUCT SCOPE

Ceresit CM 9 is a general-purpose cementitious tile adhesive that is used for indoor areas to permanently install tiles on:

- Cement and cement-lime plasters, cement screeds and concrete substrates
- Light weight AAC and concrete blocks*
- Wet areas (with periodic water penetration) e.g. bathrooms, kitchens and toilets
- Utility rooms (e.g. cellars, storerooms, drying rooms, corridors, stairs, anterooms and living rooms)
- * Primed using a suitable primer from Henkel

Kindly contact your local Henkel technical advisor for further assistance.

APPLICABLE STANDARDS

Tested according to EN 12004, ANSI A118.1

SUBSTRATE PREPARATION

Ceresit CM 9 can be applied on even, load-bearing and compact substrates that are free of any substances that reduce adherence (e.g. grease, dirt and dust).

Indoors:

- Concrete (having residual moisture ≤2%)
- Cement screeds (without floor heating), plasters, cement and lime plasters (having residual moisture ≤1.5 %)
- Aerated concrete (that is dust-free and primed*)

Substrates must not be wet. Cement and concrete screeds must be fully cured prior to application. Any existing dirt, loose debris and coatings should be removed mechanically. Absorbent substrates should be primed* and left to dry for at least 2 hours. Surface unevenness of up to 5mm can be filled on the previous day using Ceresit CM 9 tile adhesive.

* Primed using a suitable primer from Henkel.



APPLICATION

Pour Ceresit CM 9 into the precisely measured amount of clean cold water (as instructed in the technical data sheet) and mix using a slow speed drill until a homogenous mass without lumps is obtained. Leave for 2 minutes and then mix again. Apply the tile adhesive with a suitable notched trowel on the substrate. The size of the trowel's teeth depends on the size of the tile. For indoor use, the tile adhesive should cover at least 65% of the tile's backside. Place the tiles only during the open time of the adhesive. The width of the grouts should be the same and should depend on the size of the tile and exposure conditions. Excess tile adhesive can be removed with water, while hardened material can only be mechanically removed. Grouting on walls and floors can be done approximately after 8 hours and 24 hours respectively. Walkability is achieved after 24 hours. Expansion joints, corner joints and sanitary equipment surroundings shall be filled with a suitable sealant.

PLEASE NOTE

Application should be carried out in dry conditions at an air and surface temperature ranging between 5°C to 40°C.

PRODUCT SAFETY: Contains cement. Strong alkaline reaction with moisture, so please protect your skin and eyes. In case of contact, wash immediately with plenty of water. Please seek medical attention in case of contact with eyes.

Quality for Professionals

OTHER INFORMATION

In the case of laying stone tiles that are prone to color changes, sample tests should be conducted to check that the tile adhesive does not cause fading of the tiles.

Kindly contact your local Henkel technical advisor for further assistance.

SUPPLY	
Ceresit CM 9	20kg paper bag

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\text{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

TECHNICAL DATA	
Base	Mixture of cements with mineral filers and modifiers
Colour	Grey & White
Mixed density, [g/cc]	1.9±0.05
Mixing proportion	3.75 to 4.25L water per 20kg bag
Pot life @ 25°C, [hr]	>1
Open time, [min]	approx 20
Application temperature, [°C]	5 to 40
Walkability	after 24hrs @ 25 [°C]
Service temperature, [°C]	0 to 60
Initial tensile adhesion strength, [N/mm²] Tensile adhesion strength after	≥0.5 [EN 12004]
water immersion, [N/mm²] Tensile adhesion strength after	≥0.5 [EN 12004]
heat ageing, [N/mm²] Open time tensile adhesion	≥0.5 [EN 12004]
strength @ 20 minutes, [N/mm²]	≥0.5 [EN 12004]
Open time tensile adhesion strength @ 20 minutes, [N/mm²] Sag, [mm] Glazed wall tile shear strength @ 7 days, [N/mm²] Porcelain mosaic tile shear	≥0.5 [ANSI A 118.1] ≤0.5 [ANSI A 118.1] >1.38 [ANSI A 118.1]
strength @ 7 days, [N/mm²]	>1.03 [ANSI A 118.1]
VOC content, [g/L]	<0.10 [ASTM D 3960]
Coverage	2-7kg/m ² (consumption can vary depending on the evenness of the substrates, notch trowel sizes and type of tiles)
Shelf life/Storage	Approx. 12 months from production date, if stored on pallets in dry conditions and original undamaged packaging.

All values given are subject to 5-10% tolerance



CM 11 - UNIVERSAL

UNIVERSAL POLYMER MODIFIED CEMENTITIOUS TILE ADHESIVE

For indoor and outdoor application on floors and wall





CHARACTERISTICS

- Suitable for ceramic, vitrified, porcelain, mosaic, granite and sand stone tiles
- ► For indoor and outdoor areas
- ► For walls and floors
- Recommended or periodically wet areas, utility rooms, terraces and balconies
- ► Non-slip, perfect for walls
- ► Easy workability









PRODUCT SCOPE

Ceresit Ceresit CM 11 is a universal cementitious tile adhesive with very low emissions for indoor and outdoor areas to permanently install tiles on:

- Cement and cement-lime plasters, cement screeds and concrete substrates
- Light weight AAC and concrete blocks, and insulation materials like wood-cement boards and soundproofing panels*
- Gypsum and anhydrite substrates (inside)*
- Wet areas (with periodic water penetration) e.g. bathrooms, kitchens and toilets
- Utility rooms (e.g. cellars, storerooms, drying rooms, corridors, stairs, anterooms and living rooms)
- Balconies and terraces
- * Primed using a suitable primer from Henkel Kindly contact your local Henkel technical advisor for further assistance.

APPLICABLE STANDARDS

Tested according to EN 12004, ANSI A118.1 & ANSI A 118.4

SUBSTRATE PREPARATION

Ceresit CM 11 can be applied on even, load-bearing and compact substrates that are free of any substances that reduce adherence (grease, dirt and dust).

Indoors and outdoors:

- Concrete (residual moisture ≤2%)
- Cement screeds (without floor heating), plasters, cement and lime plasters (residual moisture ≤1.5 %)



Indoors:

- Anhydrite substrates (without floor heating & having residual moisture below 0.5%) and gypsum substrates (having residual moisture below 1%) that are mechanically roughened, dustfree and primed*.
- Aerated concrete (that is dust-free and primed*) Substrates must not be wet. Cement and concrete screeds must be fully cured prior to application. Any existing dirt, loose debris and coatings should be removed mechanically. Absorbent substrates should be primed* and left to dry for at least 2 hours. Surface unevenness of up to 5mm can be filled on the previous day using
- * Primed using a suitable primer from Henkel.

APPLICATION

Ceresit CM 11 tile adhesive.

Pour Ceresit CM 11 into the precisely measured amount of clean cold water (as instructed in the technical data sheet) and mix using a slow speed drill until a homogenous mass without lumps is obtained. Leave for 2 minutes and then mix again. Apply the tile adhesive with a suitable notched trowel on the substrate. The size of the trowel's teeth depends on the size of the tile. For indoor use, the tile adhesive should cover at least 65% of the tile's backside. For outdoor use, the back-buttering method should be followed to cover at least 90% of the tile's backside. Place the tiles only during the open time of the adhesive. The width of the grouts should be the same and should depend on the size of the tile and exposure conditions. Excess tile adhesive

TDS_Ceresit CM11_GCC_0223

1

Quality for Professionals

can be removed with water, while hardened material can only be mechanically removed. Grouting on walls and floors can be done approximately after 8 hours and 24 hours respectively. Walkability is achieved after 24 hours. Expansion joints, corner joints and sanitary equipment surroundings shall be filled with a suitable scalars.

PLEASE NOTE

Application should be carried out in dry conditions at an air and surface temperature ranging between 5°C to 40°C.

PRODUCT SAFETY: Contains cement. Strong alkaline reaction with moisture, so please protect your skin and eyes. In case of contact, wash immediately with plenty of water. Please seek medical attention in case of contact with eyes.

OTHER INFORMATION

In the case of laying stone tiles that are prone to colour changes, sample tests should be conducted to check that the tile adhesive does not cause fading of the tiles.

Kindly contact your local Henkel technical advisor for further assistance.

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

SUPPLY	
Ceresit CM 11	25kg paper bag
TECHNICAL DATA	
Base	Mixture of cements with mineral filers and modifiers
Colour	Grey & White
Mix density, [g/cc]	1.9±0.05
Mixing proportion	5 to 5.5L water per 25kg bag
Pot life @ 25°C, [hr]	> 1
Open time, [min]	approx. 30
Application temperature, [°C]	5 to 40
Walkability	after 24hrs @ 25°C
Service temperature, [°C]	0 to 70
Initial tensile adhesion strength, [N/mm²] Tensile adhesion strength after	≥0.5 [EN 12004]
water immersion, [N/mm²] Tensile adhesion strength after heat	≥0.5 [EN 12004]
ageing, [N/mm²] Open time tensile adhesion	≥0.5 [EN 12004]
strength @ 20 minutes, [N/mm²] Slip, [mm]	≥0.5 [EN 12004] ≤0.5 [EN 12004]
Open time tensile adhesion strength @ 20 minutes, [N/mm²]	≥0.5 [ANSI A 118.1]
Glazed wall tile shear strength @7 days, [N/mm²] Porcelain mosaic tile shear strength	>1.38 [ANSI A 118.1]
@7 days, [N/mm²] Open time tensile adhesion	>1.03 [ANSI A 118.1]
strength @ 30 minutes, [N/mm²] Glazed wall tile shear strength	≥0.5 [ANSI A 118.4]
@7 days, [N/mm²] Porcelain mosaic tile shear strength	>2.07 [ANSI A 118.4]
@7 days, [N/mm²] Quarry tile shear strength	>1.38 [ANSI A 118.4]
@28 days, [N/mm²]	>1.03 [ANSI A 118.4]
VOC content, [g/L]	<0.10 [ASTM D 3960]
Coverage	2-7kg/m² (consumption can vary depending on the evenness of the substrates,notch trowel sizes and type of tiles)
Shelf life/Storage	Approx. 12 months from production date, if stored on pallets in dry conditions and original undamaged

packaging

All values given are subject to 5-10% tolerance

CHIDDIV

CM 16 - FLEXIBLE

FLEXIBLE POLYMER MODIFIED CEMENTITIOUS TILE ADHESIVE

Extended open time and high vertical slip resistance





CHARACTERISTICS

- ➤ Suitable for ceramic, vitrified, porcelain, mosaic, granite, sand stone and marble tiles
- ► Flexible polymer modified
- ► For indoor and outdoor areas
- ► For walls and floors
- ► Non-slip, perfect for walls
- ▶ Recommended for swimming pools and wet areas
- ▶ Easy application
- ▶ Does not contain asbestos, chromated copper arsenate & lead









PRODUCT SCOPE

- Ceresit CM 16 is a polymer modified cementitious tile adhesive for indoor and outdoor areas to permanently install tiles on:
- Light weight AAC blocks, concrete blocks, wood and cement boards, and soundproofing panels*
- Gypsum and anhydrite substrates (inside)*
- Swimming pools and wet areas with extended water penetration such as bathrooms, kitchens, and toilets
- Utility rooms (e.g. cellars, storerooms, drying rooms, corridors, stairs, anterooms and living rooms)
- Balconies and terraces
- On substrates subjected to slight deformation such as plasterboards*, wood chip-boards, and heated floors
- * Primed with a suitable primer from Henkel

Kindly contact your local Henkel technical advisor for further assistance.

APPLICABLE STANDARDS

Tested according to EN 12004, ANSI A118.1 & ANSI A118.4

SUBSTRATE PREPARATION

Ceresit CM 16 can be applied on even, load-bearing and compact substrates, free of any substances that reduce adherence (grease, dirt and dust).

Indoors and outdoors:

- Concrete (having residual moisture \leq 2%)
- Cement screeds (without floor heating), plasters, cement and lime plasters (having residual moisture ≤1.5 %)



TDS Ceresit CM16 GCC 0223

1

Indoors:

- Anhydrite substrates (without floor heating and having residual moisture <0.5%) and gypsum substrates (having residual moisture <1%) that are mechanically roughened, dust-free and primed*
- Aerated concrete (that is dust-free and primed*)

Substrates must not be wet. Cement and concrete screeds must be fully cured prior to application. Any existing dirt, loose debris and coatings should be removed mechanically. Absorbent substrates should be primed* and left to dry for at least 2 hours. Surface unevenness of up to 5mm can be filled on the previous day using Ceresit CM 16 tile adhesive.

* Primed using a suitable primer from Henkel.

APPLICATION

Pour Ceresit CM 16 into the precisely measured amount of clean cold water (as instructed in the technical data sheet) and mix using a slow speed drill until a homogenous mass without lumps is achieved. Leave for 2 minutes and then mix again. Apply the tile adhesive with a suitable notched trowel on the substrate. The size of the trowel's teeth depends on the size of the tile. For indoor use, the tile adhesive should cover at least 65% of the tile's backside. For outdoor uses, the back-buttering method should be followed to cover at least 90% of the tile's backside. Place the tiles only during the open time of the adhesive. The width of the grouts should be the same and should depend on

the size of the tile and exposure conditions. Excess tile adhesive can be removed with water, while hardened material can only be mechanically removed. Grouting on walls and floors can be done approximately after 8 hours and 24 hours respectively. Walkability is achieved after 24 hours. Expansion joints, corner joints and sanitary equipment surroundings shall be filled with a suitable sealant.

PLEASE NOTE

Work should be carried out in dry conditions at an air and surface temperature from 5°C to 40°C .

PRODUCT SAFETY: Contains cement. Strongly alkaline reaction with moisture, so protect skin and eyes. After contact wash immediately with plenty of water. After eye contact also seek medical advice.

OTHER INFORMATION

In the case of laying stone tiles that are prone to color changes, sample tests should be conducted to check that the tile adhesive does not cause fading of the tiles.

Kindly contact your local Henkel technical advisor for further assistance.

D	

Ceresit CM 16 25kg paper bag

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $\pm 23^{\circ}\text{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

TECHNICAL DATA	
Base	mixture of cements with mineral fillers and modifier
Colour:	Grey & White
Mix density [g/cc]	1.7±0.05
Mixing proportion	5.25 to 5.75L water per 25kg bag
Pot life @ 25°C, [hrs]	>2
Open time, [min]	approx. 30
Application temperature, [°C]	5 to 40
Service temperature, [°C]	0 to 70
Walkability	after 24hrs @ 25°C
Initial tensile adhesion strength, [N/mm²] Tensile adhesion strength after	≥1 [EN 12004]
water immersion, [N/mm²] Tensile adhesion strength after	≥1 [EN 12004]
heat ageing, [N/mm²] Extended open time tensile adhesion	≥1 [EN 12004]
strength @ 30 minutes, [N/mm²] Slip, [mm]	≥0.5 [EN 12004] ≤0.5 [EN 12004]
Extended open time tensile adhesion strength @ 30 minutes, [N/mm²]	≥0.5 [ANSI 118.4]
Glazed wall tile shear strength @ 7 days, [N/mm²] Glazed wall tile shear strength	>2.07 [ANSI A 118.4]
@7 days water immersion, [N/mm²] Porcelain mosaic tile shear	>1.38 [ANSI A 118.4]
strength @ 7 days, [N/mm²] Porcelain mosaic tile shear	>1.38 [ANSI A 118.4]
strength @ 7 days water immersion Quarry tile shear strength	>1.03 [ANSI A 118.4]
@ 28 days, [N/mm²] Quarry tile shear strength	>1.03 [ANSI A 118.4]
after freeze-thaw-cycle [N/mm²]	>0.69 [ANSI A 118.4]
VOC content, [g/L]	<0.10 [ASTM D 3960]
Coverage	2-7kg/m² (consumption can vary depending on the evenness of the substrates, notch trowel sizes and type of tiles)
Shelf life	Approx. 12 months if stored in a tightly sealed container, in cool and dry conditions.

All values given are subject to 5-10% tolerance



CM 17 - SUPER FLEXIBLE

HIGH PERFORMANCE, DEFORMABLE TILE ADHESIVE

For indoor and outdoor areas as well as critical substrates





CHARACTERISTICS

- ► High bond strength
- ► Super flexible special polymers modified
- ► Recommended for applications over existing tiles, building boards and substrates subjected to minor movement
- ▶ Balancing substrate deformations on critical surfaces like balconies, terrace etc
- Suitable for installing large format natural and artificial tiles and stones
- ► For indoor and outdoor areas
- ► Suitable for wet areas and swimming pools
- ► Easy application
- ▶ Does not contain asbestos, chromated copper arsenate & lead











PRODUCT SCOPE

Ceresit Ceresit CM 17 is a super flexible polymer modified cementitious tile adhesive that is used for the installation of:

- Ceramic tiles and slabs
- Earthenware, stoneware, porcelain and cotto tiles
- Natural and artificial stones (that are not susceptible to staining)
- Tile over tile
- Tiles with <0.3% water absorption

Ceresit CM 17 provides a flexible adhesive bed, prevents shear stresses, and is used for indoor and outdoor applications on:

- Walls, floors, dry substrates and calcium sulphate screeds*
- Balconies, terraces and facades
- Difficult and critical substrates such as pre-existing tiles, gypsum, plasterboards, fibre-reinforced plasterboards*, and other substrates subjected to tiny movement
- * Primed using a suitable primer from Henkel Kindly contact your local Henkel technical advisor for further assistance.

APPLICABLE STANDARDS

Classified as C2TES1 in accordance with EN 12004

SUBSTRATE PREPARATION

Ceresit CM 17 adheres to all solid, load bearing, clean and dry substrates that are free of substances that reduce adhesion (grease, dirt and dust).



Indoors & Outdoors

- Concrete (having residual moisture ≤2%)
- Cement screeds (without floor heating), plasters, cement and lime plasters (having residual moisture ≤1.5 %)

Indoors

- Anhydrite substrates (without floor heating and having residual moisture <0.5%) and gypsum substrates (having residual moisture <1%) that are mechanically roughened, dust-free and primed*
- Aerated concrete (that is dust-free and primed*)

Substrates must not be wet. Cement and concrete screeds must be fully cured prior to application. Any existing dirt, loose debris and coatings shall be mechanically removed. Absorbent substrates should be primed* and left to dry for at least 2 hours.

Surface unevenness of up to $5\,\mathrm{mm}$ can be filled on the previous day using Ceresit CM 17 tile adhesive.

* Primed using a suitable primer from Henkel.

APPLICATION

Pour Ceresit CM 17 into the precisely measured amount of clean cold water (as instructed in the technical data sheet) and mix using a slow speed drill until a homogenous mass without lumps is achieved. Leave for 2 minutes and then mix again. Apply the tile adhesive with a suitable notched trowel on the substrate. The size of the trowel's teeth depends on the size of the tile. For indoor use, the tile adhesive should cover at least 65% of the tile's backside. For outdoor uses, the back-buttering method

TDS_Ceresit CM17_GCC_0223

1

Quality for Professionals

should be followed to cover at least 90% of the tile's backside. Place the tiles only during the open time of the adhesive. The width of the grouts should be the same and should depend on the size of the tile and exposure conditions. Excess tile adhesive can be removed with water, while hardened material can only be mechanically removed. Grouting on walls and floors can be done approximately after 8 hours and 24 hours respectively. Walkability is achieved after 24 hours. Expansion joints, corner joints and sanitary equipment surroundings shall be filled with a suitable sealant.

PLEASE NOTE

Application should be carried out in dry conditions at an air and surface temperature ranging between 5°C to 40°C.

PRODUCT SAFETY: Contains cement. Strong alkaline reaction with moisture, so please protect your skin and eyes. In case of contact, wash immediately with plenty of water. Please seek medical attention in case of contact with eyes.

OTHER INFORMATION

In the case of laying stone tiles that are prone to color changes, sample tests should be conducted to check that the tile adhesive does not cause fading of the tiles.

Kindly contact your local Henkel technical advisor for further assistance.

SUPPLY

Ceresit CM 17 25kg paper bag

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of $+23^{\circ}\mathrm{C}$ and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

TECHNICAL DATA	
Base	Mixture of cements with mineral fillers and modifier
Colour	White & Grey
Mix density, [g/cc]	1.6±0.05
Pot life @ 25°C, [hrs]	>2
Mixing ratio	5.75-6.25L water per 25kg
Application temperature, [°C]	5 to 40
Service temperature, [°C]	0 to 70
Walkability	approx. 24hrs @25°C
Grouting, [hrs]	after 12
Initial tensile adhesion strength, [N/mm²] Tensile adhesion strength after water immersion,[N/mm²] Tensile adhesion strength after heat ageing, [N/mm²]	≥1 [EN 12004] ≥1 [EN 12004] ≥1 [EN 12004]
Extended open time tensile adhesion strength @ 30 minutes, [N/mm²] Slip, [mm] Transverse deformation, [mm]	≥0.5 [EN 12004] ≤0.5 [EN 12004] ≤2.5 [EN 12004]
VOC content, [g/L]	<0.10 [ASTM D 3960]
Coverage	2-7kg/m ² (consumption can vary depending on the evenness of the substrates, notch trowel sizes and type of tiles)
Shelf life	Up to 12 months from the production date when stored on pallets in covered & dry conditions and in original undamaged packages

All values given are subject to 5-10% tolerance



YOUR TRUSTED CONSTRUCTION CHEMICALS PARTNER

HENKEL POLYBIT INDUSTRIES LIMITED P.O. BOX 293, RAK ROAD, UMM AL QUWAIN, UAE

HENKEL POLYBIT INDUSTRIES LIMITED P.O. B.5911, DAMMAM - 31432, INDUSTRIAL AREA – II, KSA