

# BITUPLUS G 4180

## Mineral surfaced bituminous waterproofing membrane

TDS\_Bituplus-G 4180\_GCC\_1011

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BITUPLUS G 4180 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.

### 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

### FIELDS OF APPLICATION

BITUPLUS G 4180 membrane is used for waterproofing of exposed areas such as inverted roofs, parapets, terraces, patios, airport aprons & ramp areas.

### APPLICATION

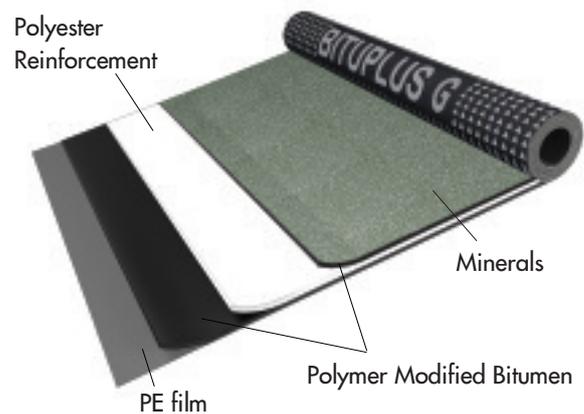
The application temperature should be between 4°C to 45°C. Application procedures may vary slightly depending upon site conditions. However below given are the general guidelines for the application of the waterproofing system:

#### 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 m<sup>2</sup>/lt 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

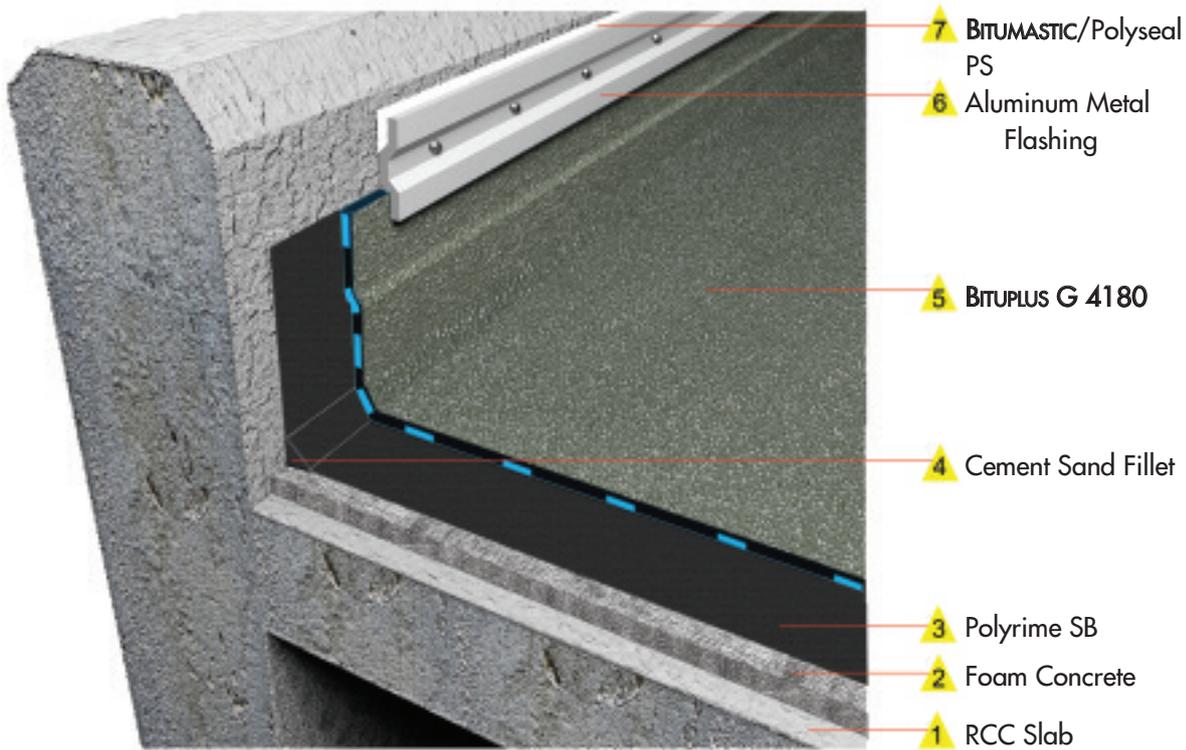


For illustration Purpose only

into the concrete pores and promote 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 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 4180 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.



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### Torching

**BITUPLUS G 4180** 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 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, 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 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 smoothed 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 4180** 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 4180** 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 4180 membranes are tested and conform to the requirements of UEAtc 2001 and ASTM.

## **HEALTH & SAFETY**

BITUPLUS G 4180 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.

## TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Thickness, [mm]	4.0	DIN EN 1849-1
Mass per unit area, [kg/m <sup>2</sup> ]	4.0-4.3	DIN EN 1849-1
Reinforcement (polyester), [g/m <sup>2</sup> ]	180	EN 29073-1
Coating asphalt Softening Point (R&B), [°C] Penetration @25°C, [0.1mm]	Atatic Poly Propylene Polymer Modified Asphalt >140 12-25	ASTM D 36 ASTM D 5
Tensile Strength (L/T), [N/5cm]	750/550	DIN EN 12311-1
Elongation @Break (L/T), [%]	35/45	DIN EN 12311-1
Shear Resistance at joints (L/T), [N/5cm]	400/300	DIN EN 12317-1
Tear Resistance (L/T), [N]	140/150	DIN EN 12310-1
	>300/200	ASTM D 5147
Resistance to Static loading	Static : L <sub>25</sub>	DIN EN 12730

All values given are subject to 5-20% tolerance

## SUPPLY

BITUPLUS G 4180	1 m x 10m, wt 45kg <sup>#</sup>
POLYPRIME SB	20 lt pail & 200lt drum
BITUMASTIC	20 kg pail

\*Refer to website for TDS

# Approximate weight

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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 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.

Manufactured in G.C.C.



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