

BITUPLUS P 4160

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 accommodate structural movements because of excellent flexibility
- ▶ High puncture and fatigue resistance
- ▶ High tensile and tear strengths
- ▶ Resistant to water borne chemicals



puncture resistance



torch applied



waterproofing

DESCRIPTION

Bituplus P 4160 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 4160 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 4160 membrane and aligning the side laps. Side overlaps should be a minimum of 100 mm and the end overlap 150mm.

Torching

Bituplus P 4160 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 smoothed 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 4160 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 4160 membranes are tested and conform to the requirements of UEAtc 2001 and ASTM.

STORAGE & SHELF LIFE

Bituplus P 4160 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 4160 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 P 4160	1 m x 10m, wt 40kg#
Polyprime SB	20L pail & 200L drum
Bitumastic	20kg pail
<i>*Refer to website for TDS # Approximate weight</i>	

TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Product	4160	
Thickness, [mm]	4.0	DIN EN 1849-1
Mass per unit area, [kg/m ²]	4.0-4.3	DIN EN 1849-1
Reinforcement (polyester), [g/m ²]	160	EN 29073-1
Water absorption (BSP), [%]	< 0.2	ASTM D 5147
Heat resistance @120°C	no flow	DIN EN 52 123
Low temperature flexibility @ 0°C	no crack	ASTM D 5147
Dimensional stability, [%]	< 1	ASTM D 6222

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.



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