

# POLYPLUS P 4160

## APP Modified Torch Applied Bitumen Water Proofing Membrane

POLYPLUS P 4160 is an APP modified bitumen waterproofing membrane, manufactured from a rich mixture of bitumen and selected polymers (Atactic Poly Propylene) blended together to obtain excellent heat, UV resistance and waterproofing properties. Polymerized bitumen then coated on to a dimensionally stable non-woven spun bond polyester fabric to obtain excellent tensile & tear strengths and puncture resistance.

### CHARACTERISTICS

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

### FIELDS OF APPLICATION

POLYPLUS P 4160 used as waterproofing / damp proofing membrane for protection of various substrates in wide range of applications which includes the following

Inverted Roofs

Terraces & balconies

Sunken slabs

Patios

Concrete foundations & footings

Basements

Pile heads

Swimming pools & water retaining structures

Bridges & tunnels

Airport aprons & ramp areas

### APPLICATION INSTRUCTION

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 @ 4-6m<sup>2</sup>/lt. 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 POLYPLUS P 4160 and re-roll correctly before torching. Overlap should be minimum of 100 mm.

#### Torching

Use gas burner to heat substrate and underside of POLYPLUS P 4160. Embossing on the lower face of the membrane allows a fast safe lying. 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.

#### Sealing

Heat both the overlaps and use round tipped trowel to seal the overlap. Excess compound should be smoothed 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.

### STANDARDS

POLYPLUS P 4160 membranes conform to the requirements of ASTM D 6164 Type I & Type II, UEAtc MOAT 31-1984, and tested in accordance with UEAtc MOAT 27-1983, ASTM D 5147 & CGSB.

## STORAGE

POLYPLUS P 4160 membranes should be stored vertically in a clean covered area. Rolls should not be stacked on top of each other.

## SAFETY PRECAUTION

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.

## TECHNICAL SPECIFICATION

PROPERTIES	VALUES	TEST STANDARDS
Thickness, (mm)	4.0	DIN EN 1849-1
Mass per unit area, (kg/m <sup>2</sup> )	4.0-4.2	DIN EN 1849-1
Reinforcement (polyester), (g/m <sup>2</sup> )	160	DIN EN 1849-1
Coating Asphalt Softening point, (°C) Penetration at 25°C, (dmm)	Polymer Modified Asphalt >130 15-25	ASTM D 36/DIN EN 1427 ASTM D 5/DIN EN 1426
Tensile Strength (L/T), (N/5cm)	450/250	DIN EN 12311-1
Elongation at Break (L/T), (%)	25/40	DIN EN 12311-1
Tear Resistance (L/T), (N)	120/140	DIN EN 12310-1
Resistance to Static loading, (N)	Static : L20	DIN EN 12730
Resistance to Water Pressure @5 bar	No Leakage	BS EN 12390
Water Absorption, (%)	<0.2	ASTM D 5147
Heat Resistance at 120°C	No Flow	DIN EN 52 123
Resistance to Aging	No Deterioration	ASTM G 53

In accordance to the standard 5 – 20 % variation is expected.

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 Egypt

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