

HYDROSTOP 4PY-SP

Self-Protected Waterproofing & Protection Membrane

DESCRIPTION

HYDROSTOP 4PY-SP is torch-applied polymer modified bituminous self-protected waterproofing and protection membrane laminated onto a tough geo-textile.

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.

The presence of non-woven polyester reinforcement at core enhances puncture and tear resistance of membrane.

The geo-textile finish on top imparts protection to membrane from puncture damage.

USES

HYDROSTOP 4PY-SP is designed to waterproof and protect various substrates encountered in horizontal and vertical applications like concrete, masonry, G.I, fibre reinforced cement sheets, asphalt, stone etc.

Due to enhanced puncture resistant property imparted by tough and durable top geo-textile finish, use of **HYDROSTOP 4PY-SP** in waterproofing of below ground concrete structures eliminates the need for additional protection board used with conventional membranes.

It is used to provide protection to existing bitumen based membranes and coatings from puncture and ultra violet ray damage.

ADVANTAGES

- Superior Performance with Uniform Thickness and Quality
- High Puncture and Tear Resistance
- High Stress Absorbing Characteristic
- High Resistance to Freeze Thaw Cycles
- High Tensile Strength and Crack Bridging Capacity

- High Resistance to Flow at High temperature
- High Resistance to Aging and Weathering
- No Curing Period – Works can be continued without waiting / shutdown period
- Good Resistance to Mild Acids, Mild Alkalis & Salts
- VERSATILE PRODUCT-Suitable on almost all types of Surfaces encountered in Building Structure- Concrete, Metal, Wood, Stone, Asphalt, Fibre Reinforced Cement Sheet, G.I. Sheets etc.

AREAS OF APPLICATION

- Basement Floors and Retaining Walls
- Protection Membrane for Bitumen based Membranes and Coatings
- Roofs and Terraces
- Podiums and Parking Decks
- Bridges, Viaducts, Tunnels and Subways

PROPERTIES

Properties	Values	Test Standard
Top Surfacing	Polyester Geo-Textile	-----
Penetration* @ 25 ^o C	< 20dmm	ASTM D 5
Softening Point*	>150 ^o C	ASTM D 36
Tensile Strength**		
Longitudinal	800 N/5cm	ASTM D 5147
Transversal	750 N/5cm	
Elongation at Break		
Longitudinal	>30 %	ASTM D 5147
Transversal	>30 %	
Water Absorption	< 0.35%	ASTM D 5147
Flexibility at Low Temperature** (No Cracks)	0 to -5 ^o C	ASTM D 5147
Dimensional Stability (L/T)	≤0.5%	ASTM D 5147
High Temperature Flow Resistance (No Flow)	>120 ^o C	ASTM D 5147
Puncture Resistance	>600 N	ASTM E154

**Values given are subject to 5-20% variation.

*Compound properties tested during manufacturing process.

** As Required

APPLICATION INSTRUCTIONS

Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the self-protected waterproofing membrane **HYDROSTOP 4PY-SP** is as follows:

Waterproofing System:

SURFACE PREPARATION

The surface should be dry and should not stagnate water and should have positive slope towards drain outlet.

The surface should be made smooth free from cracks, imperfections, protrusions using suitable material & method.

The surface shall be thoroughly cleaned to remove loose dust, foreign particles, oil, traces of curing compound and other contaminants.

APPLICATION

Priming the Surface

Prepared surfaces shall be primed using Bituminous primer **TIKI PRIMER**.

Allow the primer to dry.

Application rate of primer shall be 3 to 5 m²/kg.

Actual coverage of material depends on substrate porosity.

Alignment of Membrane Rolls

After the applied film of **TIKI PRIMER** is dry, membrane rolls are marked with required overlapping line and spread over entire area for alignment with proper overlaps.

Overlaps

Maintain side overlaps of min.5cm to max.10cm.

Maintain end overlaps of min.10cm to max.15 cm.

Re-Aligning Membranes

When the surface area is long, then unroll the membrane in alignment before torching and prevent membrane from shifting or displacement from its aligned position.

Torching and Laying of Membrane on Horizontal and Vertical Surface

Membrane shall be installed from the lowest point of the slope and progress to the highest point.

Maintaining membrane previous alignment, torch the substrate and underside of the membrane.

When the underside heating of membrane exposes shiny bitumen surface, roll forward the membrane and press firmly from above against the substrate to obtain superior and permanent bonding.

Once torching of membrane is commenced, care should be taken to avoid shifting / lifting of membrane and take care to prevent the damage to membrane.

On vertical surface, the end edge of membrane should be tuck in to the groove made on vertical surface and groove filled with cement sand mortar (or) should be fixed mechanically with metal flashing, edges flush finished with **TIKI PLAST HD SEALANT** caulking sealant.

Watertight Sealing of Seams

Maintaining the side and end overlaps, a thin bead of bitumen produced during torching at the seams should be smoothed out with a round tip hot

trowel ensuring tight and impermeable seal.

As per service condition requirement, after installation, **HYDROSTOP 4PY-SP** can be overlaid with pcc tiles / ceramic tiles / china mosaic chips bedded in cement sand mortar, xps insulation boards, round gravels, backfilled soil, screed concrete, asphalt etc.

PROTECTION SYSTEM:

SURFACE PREPARATION

In applications involving **HYDROSTOP 4PY-SP** being used as a protection layer on bitumen based membranes and coatings, the base surface shall be cleaned thoroughly of all settled dust and other contaminants.

APPLICATION

Unroll only the required length and cut the piece to the desired shape. Place the membrane piece on the area to be covered. Install the membrane using torch-on application method as per the procedure mentioned in previous section.

"HYDROSTOP should always be used with the recommended TIKIDAN primer for optimum performance of the waterproofing membrane"

SUPPLY

HYDROSTOP 4PY-SP is supplied in standard roll sizes of 1m x 10m of 4mm thickness.

STORAGE

HYDROSTOP 4PY-SP membranes must be stored above 5°C. Store under the shed & protect from extremes of temperature. Rolls must be stored in upright vertical position. Avoid stacking of rolls horizontally on their sides or in double stack position.

SAFETY PRECAUTIONS

As with all synthetic products, care should be taken during use and storage of **HYDROSTOP 4PY-SP**. As it 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 solvent.

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Tiki Tar Estate, Village Road, Bhandup (W), Mumbai - 400 078,
Maharashtra, India. T: +91 22 4126 6699
E: info@tikidan.in | W: www.tikidan.in