

# Superior ShaliPlus®

APP Modified Polymeric HMHDPE Membrane



STP Limited

## Description

**Superior ShaliPlus®** is a heavy duty APP modified polymeric waterproofing membrane, with high quality polymeric bituminous mix having high softening point, high heat resistance and cold flexibility sandwiched between two thermo fusible high-density polyethylene sheets (HMHDPE) on both sides.

## Approval / Standards

Conforms to of IS 16540 : 2017

## Product Information

<b>Colour, Appearance</b>	Black membrane, HMHDPE protection on both sides.
<b>Handling &amp; Storage</b>	The membranes must be vertically stacked and stored in a shaded area covered by a thick fabric and tied securely in a manner that will minimize exposure to sunlight and UV. The membranes should be protected from all sources of heat and extreme temperatures. Always keep the rolls in vertical position.
<b>Packaging</b>	For 2 mm - 1 m x 10 m; For 0.5 / 1 / 1.5 mm - 1 m x 20 m (Tolerance: $\pm 1\%$ )
<b>Shelf Life</b>	12 months when stored as per recommendations.
<b>Handling Precautions</b>	The membrane is non-hazardous, non-flammable and therefore can be disposed of in any regular disposal areas. All membranes however should be disposed off only after wrapping with paper, plastic or cloth. In case of contact with human skin wash with any soft solvents. Seek medical assistance immediately in case of any allergy.

## Technical Characteristics at 50% RH

Property	Superior ShaliPlus®				
	2020	2020 SA*	2030	2045	1030
Colour	Black				
Softening Point, °C	$\geq 120$				
Penetration at 25°C, 100 grams, 5 sec	$15 \pm 5$				
Heat resistance 100°C for 2 hrs.	Does not drip				
Water absorption, %, maximum	0.2				
Pressure Head Test	No Sign of leakage				
Cold flexibility at 5°C	Does not crack				
Elongation, %					
• Lengthwise	100 - 120				300 - 325
• Crosswise	100 - 115				300 - 315
Tensile Strength, N / 5 cm					
• Lengthwise	40			60	140
• Crosswise	30			40	120
Additional Center Core, microns				20	100
Thickness, mm	0.50	1.0	1.5	2.0	
Length, meters	1 x 20				1 x 10

\* Self-adhesive

## Field of Application

**Superior ShaliPlus®** is recommended for waterproofing of,

- Medium to large roof slabs (domestic, commercial, industrial)
- Underground car parks
- Swimming pools
- Bridges & tunnels
- Roof gardens

## Advantages

- Good elongation to absorb all structural movements.
- High softening point & high penetration.
- Dimensional stability with pliability to adopt to all contours.
- Flexibility at very low temperature.
- Resistance to atmospheric agents, weathering, chemical attacks.

## Application Information

✓ <b>Substrate Temperature</b>	-	+5°C Min / +45°C Max
✓ <b>Ambient Temperature</b>	-	+5°C Min / +45°C Max
✓ <b>Substrate Moisture Content</b>	-	< 5%

## Application Methodology

### ➤ Substrate Preparation

- New concrete should be cured for at least 28 days.
- Cementitious or Mineral based substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and to achieve an open textured surface.
- Loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed.
- Build-up proper gradient of the surface with PCC admixed with **ShaliPlast IW**.
- Ensure that level of all drain mouth is lower than deck slab level by at least 15 mm.
- Correct all construction joints by grouting with ShaliGrout IP at 1 m apart and opening of joints in "V" cut groove and fill with **ShaliFix FRM**, using **ShaliSBR Latex** as the bond. Provide 75 mm x 75 mm coving made out polymer modified mortar prepared with **ShaliCrete-Cement-Sand** (1 : 2 : 5) after applying a bond coat with **ShaliSBR Latex**.
- The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior to any primer application.

### ➤ Waterproofing Application

- Apply a coat of **ShaliTex Primer** @ 0.3 - 0.4 L / m<sup>2</sup> and allow it to dry. In areas of high humidity, the prime surface should be left over-night.
- On primed surface, use **STP Bitumen** Grade 85/25 or **ShaliBond BS/CS** cold adhesive (wherever hot application is difficult or not permitted) as bonding material which is to be prepared by heating it to the correct working temperature and spreading over the roof properly and uniformly @ 1.2 kg / m<sup>2</sup> per coat for waterproofing application or as specified.
- Unroll and fix **Superior ShaliPlus®** by applying uniform pressure with hand for removal of any entrapped air.
- Provide overlap joints of 75 mm in longitudinal direction and 100 mm in transverse direction of the **Superior ShaliPlus®** roll and seal it properly with hot bitumen.
- For double layer treatment, stagger all overlap joints.
- Terminate **Superior ShaliPlus®** at the top of parapet if the height of parapet is up to 450 mm. In case the height of the parapet is above 450 mm, membrane shall be terminated at parapet in a groove 75 x 65 mm at a height of 300 mm from the roof level and groove shall be filled up with a polymer modified mortar prepared with **ShaliCrete-Cement-Sand** (1 : 2 : 5) after applying a bond coat with **ShaliSBR Latex**.
  - Ensure that a constant flow of bitumen is maintained across the whole width of the roll and that a bead of bitumen is extruded from all edge which demonstrates that a good seal has obtained.
  - All angles & abutments upstands should be sealed with extra care to ensure perfect bondage. Seal the edges well into grooves & protect to seal with polysulphide sealant **ShaliSeal PS GG**.
  - **Superior ShaliPlus®** applied all over the terrace must be finished with a coating of **SuperSilverShield** for non-trafficable area. For foot trafficable area, overlay with PCC dosed with **ShaliPlast IW** of 50 mm thick/ tiles loosely laid or fixed.

## Precautions

- Do not apply during rain or extreme temperature.
- Any naked flame should be kept away from gas cylinders.
- Avoid abuses which may lead to puncturing of membrane.
- Do not overheat **Superior ShaliPlus®** membrane i.e., avoid heating when it starts smoking.
- Apply parapet to parapet to envelope the entire building for long term performance.

## Value base of product data

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control and different test methods.

## Health and Safety information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent **Material Safety Data Sheet**.

- Store in a cool, dry place. Keep out of reach of children and away from eatables.
- May be harmful if swallowed
- In case of ingestion seek immediate medical attention.
- Eye protection during application is recommended.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- In case of skin contact, wash with soap and plenty of water. Get medical attention if irritation develops or persists.
- It is recommended to wear suitable nose pad during torching application and surface preparation. Dispose as per recommendation mentioned above.



**STP Limited**  
*Enhancing Structures' Life*

### Product Range

- Waterproofing and Insulation ■ Road Surfacing
- Sealants and Additives ■ Pipeline Coating
- Protective / Anti-Corrosive Coating ■ Epoxy Flooring
- Grouts / Admixtures ■ RestoFix- Repair / Rehabilitation
- Other Construction Chemicals



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