

# ShaliUrethane<sup>®</sup> BTD

Water Based UV Resistant Elastomeric PU Liquid Membrane



STP Limited

## Description

**ShaliUrethane<sup>®</sup> BTD** is UV resistant, high performance, water based, cold applied, single component elastomeric in-situ liquid membrane for waterproofing. **ShaliUrethane<sup>®</sup> BTD** forms a seamless monolithic membrane, which can be applied on moist surface not exceeding 5%.

It conforms to ASTM C 836 and ASTM D 6083.

Use Horizontal / Vertical grade of **ShaliUrethane<sup>®</sup> BTD** for horizontal / vertical application respectively.

## Characteristics - Physical

Color	White / Black	Touch Drying time #, minutes	20 - 30
Solid content, %	> 80	Full cure time #, days	7
Service temp, range, °C	- 20 to + 100	UV stability	Excellent
Theoretical Coverage *, 1 mm DFT, Kg / m <sup>2</sup>	1.85	VOC Content, gm / kg	Nil
		pH	Alkaline
Specific gravity @ 30 °C	1.5 ± 0.03	Viscosity @ 30 °C, cps	6500 ± 1500
Application Temperature, °C	> 5	Elastic Recovery @ 150% elongation, %	70 – 75
Solar Reflective Index			
• Black	N/A		
• White	109		

\* Depending upon surface condition

# Depends up on weather condition.

## Characteristics - Technical

Elongation, %	ASTM D 2370	400 ± 50
Tensile strength, MPa	ASTM D 2370	1.40 ± 0.2
Adhesion to primed concrete, Pull off strength, MPa	ASTM D 4541	0.40
Extension after heat aging, mm	ASTM C 836	6
Crack bridging at low temperature	ASTM C 836	No cracking
Water Absorption %	IS 13826 Part 3	< 5
Hardness Shore A	ASTM D 2240	> 50

## Application

- Roof / Terraces, including corrugated roof.
- Terrace garden.
- Podium.
- Planter boxes.

## Advantages

- Can be applied on moist surface also.
- Excellent water vapour barrier.
- High Crack Bridging.
- Monolithic / seamless in-situ Membrane.
- Excellent adhesion to concrete.
- Excellent elongation and very good low temperature flexibility.

## Application Methodology

### ➤ Surface Preparation

- Remove all loose gravel, dirt, oil, grease and foreign matter by jet of dry air and clean the surface mechanically or by grinding to make it smooth before application.
- Repair all cracks by cutting "V" groove and fill with PMC mortar prepared in the ratio of ShaliCrete : Cement : Sand (1 : 2 : 5).
- Provide 75 mm x 75 mm coving made out of PMC mortar as above, using ShaliSBR Latex as bond coat.
- Ensure that the moisture content in the prepared surface does not exceed 5%.

### ➤ Material Preparation

- Stir **ShaliUrethane® BTD** by a slow speed mixture (approx. 400 rpm) fitted with a suitable mixing paddle to ensure a homogenous mix.
- Skin formation may happen on the top of material during humid condition. In that event, cut skin from the periphery of the container and remove it and then stir it as mentioned above.
- After stirring, wait for the product to settle in order to let entrapped air escape.

### ➤ Waterproofing Application

- Slightly damp the surface. Avoid standing water / ponding.
- Prime the surface with ShaliPrime WP WB @ 400 gm / m<sup>2</sup>. In case of white **ShaliUrethane® BTD**, prime the surface with **ShaliUrethane® BTD** diluted with potable water in the ration of 1 : 1 and apply @ 400 gm / m<sup>2</sup> for better aesthetic look. Allow the primed surface to touch dry.
- Apply 1<sup>st</sup> coat of **ShaliUrethane® BTD** @ 1 kg / m<sup>2</sup> by brush / roller / airless spray while the primed surface is tacky. For faster and smoother application, apply with airless gun.
- Spread non-woven geo-textile mesh of 40 / 50 gsm with overlaps of 50 mm in both directions when the surface is still tacky; this is optional, to be assessed as per site requirements to achieve higher mechanical properties.
- Allow 1<sup>st</sup> coat to dry for 10 – 12 hr.
- Apply 2<sup>nd</sup> coat of **ShaliUrethane® BTD** @ 1 kg / m<sup>2</sup> by brush / roller / airless spray for final DFT of 1500 micron in two coats (theoretical coverage depending on surface conditions).
- Ensure final curing time of 36 hrs before allowing / carrying out any further work.
- Extend waterproofing treatment up to 200 mm and terminate into groove on the parapet wall. Fill the groove with PMC mortar. Apply 15 mm plaster admixed with ShaliPlast LW + @ 200 ml / bag of cement for vertical protection.
- Conduct ponding test after 7 days of curing at ambient temperature.
- **For Heavy duty area, apply third coat of ShaliUrethane® BTD @ 1 kg / m<sup>2</sup>.**

### ➤ Protection of Waterproofing

- Spread separation layer of 200 gsm geo-textile, ShaliGeoText 200 with overlap of 50 mm in both directions on fully cured waterproofed surface before laying protection screed.
- Protect the surface with 50 mm PCC admixed with integral waterproofing compound, ShaliPlast LW+ @ 200 ml / bag of cement with galvanised chicken wire mesh ensuring a gradient of 1 : 100 towards drain.

## Health & Safety

- Avoid contact with skin / eyes, and avoid swallowing.
- Ensure adequate ventilation and avoid inhalation of vapour.
- Wear suitable protective clothing, gloves and eye protection.
- In case of skin contact, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of eye contact, wash with plenty of clean water and seek medical advice.
- If swallowed, seek medical attention immediately. Do not induce vomiting.

### **Packing**

Available in 25 kg pack.

### **Storage**

Store in a cool dry place, under shed, away from heat.

### **Shelf Life**

12 months in original unopened sealed condition.

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