

# ShaliUrethane<sup>®</sup> BTD

Water Based UV Resistant Elastomeric Modified 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%. But, do not apply in standing water.

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	40 - 45
Solid content, %	> 80	Full cure time #, days	7
Service temp, range, °C	- 20 to + 100	UV stability	Excellent
Theoretical Coverage *, 1 mm DFT	1.85 Kg / m <sup>2</sup>	VOC Content, gm / kg	Nil
		pH	Alkaline
Specific gravity @ 30 °C	1.5 ± 0.03	Viscosity @ 30 °C, cps	7500 ± 1500
Application Temperature, °C	> 5	Elastic Recovery @ 150% elongation, %	70 - 75

\* Depending upon surface condition

# Depends on weather condition.

## Characteristics - Technical

Elongation, %	ASTM D 2370	500 ± 50
Tensile strength, MPa	ASTM D 2370	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 %	ASTM D 471	< 5

## 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.

### ➤ Material Preparation

- Stir **ShaliUrethane® BTD** by a slow speed mixture (approx. 400 rpm) fitted with a suitable mixing paddle to ensure a homogenous mix.
- 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 grm / 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 grm / 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 fibreglass net 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).
- Sprinkle sand @ 200 grm / m<sup>2</sup> over the final **vertical** coating when the surface is still tacky to facilitate plastering.
- 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.

**Self Life**

12 months in original unopened sealed condition.

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