

ShaliUrethane® BTD

Water Based UV Resistant Elastomeric PU Liquid Membrane



STP Limited

Description

ShaliUrethane® BTD is high performance, water based, cold applied, single component elastomeric in-situ liquid membrane for waterproofing usually produced in White / Terracotta / Green colour. It may also be supplied in Black colour against specific orders.

ShaliUrethane® BTD is UV resistant. However, for better UV resistance, we recommend use of White colour BTD, having SRI Index >109, thus facilitating considerable saving in energy.

Shal Urethane® BTD forms a seamless monolithic membrane and can be applied on moist surface. It conforms to ASTM C 836 and ASTM D 6083-97a. Use Horizontal / Vertical grades for horizontal / vertical application respectively.

Characteristics - Physical

Color	White / Grey / Terracotta / Black	Touch Drying time #, minutes	20 - 30
		Full Cure time #, days	7
		UV Stability	Excellent
Solid content, %	> 80	VOC Content, gm / kg	Nil
Service temp, range, °C	- 20 to 100	pH	Alkaline
Theoretical Coverage*, DFT, kg / m ² • For 1.0 mm • For 1.2 mm	1.85 2.20	Solar Reflective Index (ASTM C 1549, C 1371, E 1890) • Terracotta / Grey / Black • White	N/A 109
		Specific Gravity @ 30°C	1.5 ± 0.03
Application Temperature, °C	> 5	Elastic Recovery @ 150%	70 - 75
Viscosity @ 30°C, cps	6500 ± 1500	Elongation, %	

* 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 2.0 ± 0.2 (w/ fabric)
Adhesion to primed concrete, Pull-off strength, MPa	ASTM D 4541	1.50
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
Water Permeability	IS 2645	Negligible
Hardness, Shore A	ASTM D 2240	> 50

Application

- Roof / Terraces, including corrugated roof
- Podium
- Refurbishment of APP / SBS / TarFelt roof
- Gutter waterproofing

Advantages

- White **ShaliUrethane® BTD** has excellent SRI of 109, thus facilitates energy saving and provides good cooling effect under the treated surface.
- White **ShaliUrethane® BTD** is recommended for all slope roofs and not trafficable roofs, which needs no protection.
- Can be applied on moist surface also.
- Excellent water vapour barrier.
- High Crack Bridging.
- Monolithic / seamless / breathable 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 gradient of 1:100 towards drain by laying PCC admixed with integral waterproofing compound, **ShaliPlast IW** @ 200 ml / bag of cement preferably with galvanized chicken wire mesh.
- Ensure that there is no standing water on the applicable surface.

➤ Material Preparation

- Stir **ShaliUrethane**[®] **BTD** by a slow speed mixture fitted with a suitable mixing paddle to ensure a homogenous mix. Small settlement is to be mixed by hand stirring first before mechanical stirring.
- 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
 - In case anti-root property is desired, use **ShaliPrime WP WB** @ 200 gm / m² or
 - In other case dilute **ShaliUrethane**[®] **BTD** with water @ 1:1 ratio and use as primer @ 400 gm / m².
- Allow the primer coat to touch dry condition.
- Apply 1st coat of **ShaliUrethane**[®] **BTD** @ 1 kg (or 0.8 kg) / m² 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 fabric or Fiber Glass Tissue / scrim of 45 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 1st coat to dry for 10 - 12 hr.
- Apply 2nd coat of **ShaliUrethane**[®] **BTD** @ 1 kg (or 0.8 kg) / m² by brush / roller / airless spray for final DFT of 1200 micron in two coats (for 1000 microns DFT apply 0.825 kg / m² / coat).
- 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 with **ShaliSBR Latex**.
- In case of vertical application, protect the applied liquid membrane
 - By sprinkling sand @ 200 gm / m² over the final coating when the surface is still tacky to facilitate plastering with 25 mm plaster admixed with **ShaliPlast IW** @ 200 ml / bag of cement.
- In case of horizontal surface, if protection is desired, protect the applied **ShaliUrethane**[®] **BTD**
 - Preferably with **ShaliProtek PU HA**, high abrasion resistance liquid coating which can take foot traffic, or
 - 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, and then lay 50 mm plaster admixed with **ShaliPlast IW** @ 200 ml / bag of cement.
- For Heavy duty area, apply third coat of **ShaliUrethane**[®] **BTD** @ 1 kg / m².
- Conduct ponding test after 7 days of curing at ambient temperature.

➤ Precautions

- Mixing water is to be done for primer application @ 1:1 dilution.
- In case of any application difficulty, seek assistance from STP's Technical Cell.
- Do not allow any movement over waterproofed area unless ponding is done and waterproofed area is protected as above.
- For metal roof contact STP's Technical Team for DTM Type primer.
- On unprotected surface of coating, do not allow standing water for longer time.

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.



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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