

ShaliUrethane[®] BTD Plus

Water Based UV Resistant Elastomeric Fiber Reinforced PU Liquid Membrane



STP Limited

Description

ShaliUrethane[®] BTD Plus is high performance, water based, fiber reinforced, anti-algae, 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. It 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

Colour	White	Touch Drying time, minutes	30-50
		Full cure time, days	7
		UV stability	Excellent
Solid content, %	> 80	VOC Content, gm / kg	Nil
Service temp, range, °C	- 20 to 100	pH	8-10
Theoretical Coverage *,DFT, Kg / m ² For 1.0 mm in 2 coats	2.20	Solar Reflective Index (ASTM C 1549, C 1371, E 1890) • Terracotta / Green • White	N/A 109
		Density, gm/cc	1.5 ± 0.02
Application Temperature, °C	> 5	Elastic Recovery @ 150%	70 - 75
Viscosity @ 30°C, cps	4500 ± 1500	Elongation, %	

* Depending upon surface condition

Depends up on weather condition.

Characteristics - Technical

Elongation, %	ASTM D 2370	350 ± 50
Tensile strength, MPa	ASTM D 2370	1.60 ± 0.2
Adhesion to primed concrete, Pull off strength, MPa	ASTM D 4541	0.50
Extension after heat aging, mm	ASTM C 836	6
Crack bridging upto 2 mm	ASTM C 836	No cracking
Water Absorption, %	IS 13826 Part 3	< 5
Water Permeability	IS 2645	Negligible
Hardness, Shore A	ASTM D 2240	> 50

Field of Application

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

Advantages

- White **ShaliUrethane[®] BTD Plus** has excellent SRI of 109, thus facilitates energy saving and provides good cooling effect under the treated surface.
- White **ShaliUrethane[®] BTD Plus** 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 Plus** 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 with **ShaliPrime WB** @ 200 gm / m² or
 - In other case dilute **ShaliUrethane® BTD Plus** 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 Plus** @ 1.0Kg / m² by brush / roller while the primed surface is tacky.
- Spread non-woven geo-textile 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 Plus** @ 1.0 Kg / m² by brush / roller 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 hours 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 Plus**
 - 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 Plus** @ 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.



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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