

ShaliUrethane[®] LM

Moisture Cured UV Resistant PU Waterproofing Liquid Membrane



STP Limited

Description

ShaliUrethane[®] LM is single component, aliphatic, polyurethane elastomeric liquid membrane for waterproofing, **ShaliUrethane[®] LM** forms a seamless monolithic membrane, which cures in presence of atmospheric moisture to form a UV resistant, seamless, monolithic waterproofing membrane.

It conforms to ASTM C-836 and C-898.

Use **Horizontal / vertical grade of ShaliUrethane[®] LM** horizontal / vertical applications respectively.

Characteristics - Physical

Application	Brush / Roller / Airless Spray	UV Resistance	Excellent
Tack free time, hr	8 -10	Final cure time, hr, solid	24 - 36
Solid content, %	90 ± 2	Loss of weight, %	10 ± 2
Extension after heat aging, mm	6.4 with no cracking	VOC Content, gm / kg	100 ± 20
Theoretical Coverage m ² / mm DFT, kg *	1.4 *	Chemical stability	Resistant to most mild acids and alkalis
Service temp, range, °C	- 40 to + 70	Swelling in water	Nil

* Depending upon surface condition.

Characteristics - Physical

Properties	Standard	Results
Elongation, %	ASTM D-412	> 500
Tensile strength, MPa	ASTM D-412	1.2 ± 0.1
Hardness - Shore A - Shore 00	ASTM D-2240	12-16 50-60
Crack bridging at low temperature at minus 9 °C, mm	ASTM C-836	≤1.5
Adhesion to primed concrete, Pull strength MPa	ASTM D-4541	2.5 ± 0.2

Application

- Tunnels.
- Roof / Terraces / Dome

Advantages

- Excellent Waterproofing Characteristics.
- High Crack Bridging.
- Monolithic and Seamless Membrane.
- Excellent adhesion to concrete.
- Resistance to Root Growth.
- High Durability & High Elongation Property.
- Easy Application and User Friendly.

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 50 mm x 50 mm coving made out of PMC mortar as above.
- Ensure that the moisture content in the prepared surface does not exceed 5% immediately before application of **ShaliUrethane® LM**.

➤ Material Preparation

- Stir **ShaliUrethane® LM** 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.
- 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.
- Use the material within 4 hours of opening the container.

➤ Waterproofing Application

- Apply a coat of ShaliPrime PUM @ 8 -10 m² / L.
- Apply first coat of **ShaliUrethane® LM** @ 0.70 kg / m² by brush / roller / airless spray while the primed surface is tacky. For faster and smoother application, airless spray is preferred.
- Spread fiber glass net of 45 gsm with overlaps of 50 mm in both directions when the surface is still tacky.
- Allow 1st coat to dry for 10 – 12 hr.
- Apply second coat of **ShaliUrethane® LM** @ 0.70 kg / m² by brush / roller / airless spray for final DFT of 1000 micron in two coats (theoretical coverage depending on surface conditions).
- Sprinkle sand @ 200 grm / m² 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.
- **For higher thickness, need to apply extra coat.**

➤ Protection of Waterproofing

- Spread ShaliGeoText 150 gsm with overlap of 50 mm in both directions on fully cured surface.
- Protect surface with 50 mm PCC admixed with ShaliPlast LW+ and a gradient of 1 : 100.

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 20 kg packing.

Storage

Store in a cool dry clean place, at 4 °C - 27 °C, in original sealed containers.
Sometime an easily removable protective skin of **ShaliUrethane® LM** may form on top during storage, which does not affect performance of the product.

Shelf Life

6 Months in original unopened sealed condition.



STP's Businesses
Waterproofing & Insulation
Road Surfacing
Pipeline Coating
Protective / Anti-Corrosive Coating
GARA (Grouts & Admixtures)
Sealant & Additives
Repairs & Rehabilitation
Epoxy Flooring

