

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 when comes in contact with atmospheric moisture to form a UV resistant, seamless, monolithic waterproofing membrane.

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

Characteristics – Physical

Application	Brush / Roller / Airless Spray	Colour	Terracotta / Green / Grey / White
UV Resistance	Excellent		
Solid content, %	90 ± 2	Final cure time, hr, solid	28
Strength @ 100% Modulus, N	3 ± 1	Tack free time, hrs	18 - 24
Recovery @ 200% elongation, %	98 ± 2	VOC Content, gm / kg	110 ± 10
Extension after heat aging, mm	6.4 with no cracking	Chemical stability	Resistant to most mild acids and alkalis
Theoretical Coverage* m ² / 500 Micron DFT, kg	0.77		
Service temperature, °C	- 40 to + 70	Swelling in water	Nil

* Depending upon surface condition.

Characteristics - Technical

Properties	Standard	Results
Elongation, %	ASTM D-412	> 400
Tensile strength, MPa	ASTM D-412	1.0 ± 0.1
Hardness - Shore A	ASTM D-2240	36 - 40
Crack bridging at low temperature at minus 9 °C, mm	ASTM C-1305	≤1.5
Adhesion to primed concrete, Pell strength, N / m	ASTM C 794	180 ± 10
Adhesion in Pull Strength on concrete surface, N/mm ²	ASTM D 4541	2 ± 0.3

Application

- Tunnels.
- Roof / Terraces / Dome

Advantages

- Excellent Waterproofing Characteristics.
- High Crack Bridging.
- Monolithic and Seamless Membrane.
- Excellent adhesion to concrete.
- Resistant 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).
- Correct honeycomb / other minor surface defects with PMC mortar using ShaliSBR Latex as the bond coat.
- Ensure provision of slope in the gradient of 1 : 100 towards drain by laying PCC admixed with integral waterproofing compound, ShaliPlast LW+ @ 200 ml / bag of cement preferably with galvanised chicken wire mesh.
- Provide fillet 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% immediately before application of **ShaliUrethane® LM**.

➤ Material Preparation

- 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.
- Stir **ShaliUrethane® LM** by a slow speed mixture 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.
- Use the entire material within 4 hours of opening the container.

➤ Waterproofing Application

- Prime the surface with
 - In case anti-root property is desired, tar extended anti-root primer-cum-sealer, ShaliPrime WP WB @ 200 grm / m² or
 - In other cases, ShaliPrime PUM @ 4 - 5 m² / L.
- Allow the primer to touch dry condition.
- Apply first coat of **ShaliUrethane® LM** @ 0.62 kg / m² by brush / roller / airless spray while the primed surface is tacky. For faster and smoother application, airless spray is preferred.
- Spread non-woven geo-textile or Glass Fibre Tissue 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** @ 0.62 kg / m² by brush / roller / airless spray for final WFT of 1000 micron in two coats (theoretical coverage depending on surface conditions).
- **ShaliUrethane® LM**, being aliphatic in nature, can be applied as protective top coat over **ShaliUrethane® LHM** @ 0.77 kg / m² to get 500 micron DFT, which enhances durability of **ShaliUrethane® LHM** from UV over long period when exposed to atmosphere.
- In case plastering is desired, sprinkle sand @ 200 grm / m² over the final **vertical** coating when the surface is still tacky to facilitate screeding. In other cases of vertical application, use ShaliTA 10 @ 900 grm per 25 kg bucket; in case of addition of ShaliTA 10, stir the compound thoroughly for 5 minutes to obtain homogenous mix.
- Ensure final curing time of 36 hrs before allowing / carrying out any further work.
- Foot traffic may be allowed after 72 hrs.
- 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 in the groove admixed with ShaliPlast LW + @ 200 ml / bag of cement for vertical protection.
- **For higher thickness, need to apply extra coat.**

➤ Precautions

- Do not allow any movement over waterproofed area unless ponding is done and waterproofed area is protected as below.
- Seek assistance from STP's Technical Cell for heavy duty application and other technical inputs, if any.

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 drum.

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 Limited
Enhancing Structures' Life

Product Range

- Waterproofing & Insulation ■ Road Surfacing
- Sealants & Adhesives ■ Pipeline Coatings
- Protective/Anti-Corrosion Coatings ■ Epoxy and Flooring
- Grouts and Admixtures (GARA)
- RestoFix - Repair/Rehabilitation ■ Other Construction Chemicals



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