

# ShaliUrethane<sup>®</sup> LHM 2K

2K Liquid Applied Polyurethane Water Proofing Membrane



STP Limited

## Description

**ShaliUrethane<sup>®</sup> LHM 2K** is a two component, elastic, cold applied polyurethane liquid membrane system for water proofing and protection.

It conforms to ASTM C836 and C 898.

## Characteristics - Physical

Composition	Polyurethane resin and Catalyst	Resistance to water Pressure, 1 M water column, 24 hrs	No Leak
Solid content, %	90 ± 2	Mixing ratio	Unit pack
Tack Free Time, hrs	2 ± .5	Service Temperature °C	(-) 40 to (+) 120
Theoretical Coverage*, kg / m <sup>2</sup> , 1 mm DFT	1.46	Pot Life @ 27 °C, RH 60%, minutes	60 ± 10
Re-coat time, hrs	6 – 8	Trafficable time, hrs	After 24

\* Depending upon surface condition.

## Characteristics - Technical

Elongation at Break (%)	ASTM D-412	400 ± 50
Hardness (Shore A)	ASTM D-2240	40 ± 5
Tensile Strength (MPa)	ASTM D-412	2.2 ± 0.5
Water Absorption (%)	ASTM D-471	< 0.5
Tear strength, MPa	ASTM D-624	> 28

## Application

- Bridge deck waterproofing.
- Roofs and terraces.
- Podium.
- Retaining Walls.
- Swimming Pool.
- Tunnels.

## Advantages

- Easy to apply.
- Medium tensile.
- Excellent crack bridging properties Blister free coating. No appearance of holes in the surface during the curing of material
- Prevents moisture penetration, provide complete sealing and anti-corrosion to the metal surface.
- Excellent bonding to all building substrates like concrete, plaster, metal, wood.
- Resistant to water, frost, mild acid and alkali.

## 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® LHM 2K**.

#### ➤ 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® LHM 2K** 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 SB @ 400 grm / m<sup>2</sup> or
  - In other cases, ShaliPrime PUM @ 8 – 10 m<sup>2</sup> / L.
- Allow the primer to touch dry condition.
- Apply 1<sup>st</sup> coat of **ShaliUrethane® LHM 2K** @ 730 grms / 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 non-woven geo-textile 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® LHM 2K** @ 730 grms / m<sup>2</sup> by brush / roller / airless spray.
- 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.
- In case of vertical application, protect the applied liquid membrane
  - By sprinkling sand @ 200 grm / m<sup>2</sup> over the final coating when the surface is still tacky to facilitate plastering, and 25 mm plaster admixed with ShaliPlast LW + @ 200 ml / bag of cement
- In case of horizontal surface, protect the applied liquid membrane
  - Preferably with ShaliUrethane WB 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 LW + @ 200 ml / bag of cement
- Conduct ponding test after 7 days of curing at ambient temperature.

#### ➤ 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 vapor.
- Wear suitable protective clothing, gloves and eye protection.
- In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent to clean the contacted area.
- In case of contact with eyes, wash immediately with plenty of clean water and seek medical advice.
- If swallowed seek medical attention immediately. Do not induce vomiting.

## Packing

Available in 26 kg pack consisting of Component A 25 kg and Component B 1 kg.

## Storage

Store in a cool dry place under shed away from heat.

## 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



**Advisory Cell: +91 81302 81114**