

ShaliUrethane[®] WPU

Water Based PU Waterproof coating



Description

ShaliUrethane[®] WPU is high performance, water based, cold applied, single component elastomeric liquid membrane for waterproofing of concrete surfaces.

ShaliUrethane[®] WPU is UV resistant. It forms a seamless monolithic membrane and can be applied on moist surface.

It conforms to ASTM D 6083-97a.

Characteristics – Physical

Color	White	Touch Drying time #, minutes	20 - 30
Specific gravity @ 25°C	1.4 ± 0.03	Full cure time #, days	14
Solid content, %	62 ± 2	Theoretical Coverage *, for 1.0 mm DFT, kg / m ²	2
pH	Alkaline		

* Depending upon surface condition

Depends up on weather condition.

Characteristics - Technical

Elongation, %	ASTM D 412	260 ± 40
Tensile strength, MPa	ASTM D 412	2.0 ± 0.2
Adhesion to primed concrete, Pull off strength, MPa	ASTM D 4541	1.5 ± 0.3
Crack bridging at low temperature, mm	ASTM C 836	1.5
Water Absorption, %	IS 13826 Part 3	< 5
Water Permeability	IS 2645	Negligible
Surface Hardness, Shore A	ASTM D 2240	50 - 55
Elastic Recovery @ 150% Elongation, %	ASTM D 412	80 - 85
Solar Reflective Index (SRI)	ASTM E 1980 - 11	102
UV stability	ASTM D 4587	Excellent

Application

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

Advantages

- Good tensile strength & bonding with the concrete.
- Flexible & good crack bridging ability.
- Recommended for all slope roofs and not trafficable roofs.
- Can be applied on moist surface also.
- Excellent water vapour barrier.
- Liquid applied membrane, can be applied by brush / roller.
- On drying it forms a monolithic / seamless / breathable in-situ membrane.
- 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® WPU** 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 by diluting **ShaliUrethane® WPU** 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® WPU** @ 1 kg / 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 50mm 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. then apply 2nd coat of **ShaliUrethane® WPU** @ 1 kg / m² by brush / roller.
 - 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® WPU**
 - 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.
 - Conduct ponding test after 7 days of curing at ambient temperature.
- **Precautions**
 - Mixing water is to be done for primer application @ 1:1 dilution & it should be stirred occasionally & consumed within 1 Hr. of mixing.
 - 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.



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