

REC COAT PU 111

SINGLE COMPONENT POLYURETHANE WATER PROOF COATING

DESCRIPTION

REC COAT PU 111 is a premium, liquid-applied, highly permanent elastic, cold applied and cold curing, single component polyurethane coating used for long-lasting waterproofing. The **REC COAT PU 111** is based on pure elastomeric hydrophobic polyurethane resins, which result in excellent mechanical, chemical, thermal, UV and natural element resistance properties. Cures by reaction with ground and air moisture.

PRIMARY APPLICATIONS

- Waterproofing of Roofs.
- Waterproofing of Balconies, Terraces and Verandas.
- Waterproofing of Wet Areas (under-tile) in Bathrooms, Kitchens, Balconies, Auxiliary Rooms, etc.
- Waterproofing of Pedestrian and Vehicular traffic Decks.
- Waterproofing of Green Roofs, Flowerbeds, Planter Boxes.
- Waterproofing of old Bitumen felts, Asphalt felts, EPDM and PVC membranes and old acrylic coatings.
- Protection of Polyurethane Foam Insulation.
- Waterproofing and protection of Concrete constructions like Bridge-Decks, Tunnels, Stadium Stands, Car Parks, etc.

FEATURES/BENEFITS

- Simple application (roller or airless spray).
- When applied forms seamless membrane without joints.
- Resistant to water & frost.
- Resistant to root penetration, so it can be used in green roofs.
- Crack-bridging up to 2mm, even at -10 C.
- Provides water vapor permeability, so the surface can breathe.
- Provides excellent thermal resistance, it never turns soft.
- Provides excellent weather and UV resistance.
- Waterproofs old bitumen-, asphalt felts by covering them, without the need to remove them prior to application.
- Provides high sun reflectivity, contributing to thermo insulation.
- Maintains its mechanical properties over a temperature span of -40 C to +90 C.
- Provides excellent adhesion to almost any type of surface.
- The water proofed surface can be used for domestic and public pedestrian and vehicular traffic.
- Resistant to detergents, oils, sea water and domestic chemicals.
- Even if the membrane gets mechanically damaged, it can be easily repaired locally within minutes.
- Does not need the use of open flames (torch) during application.
- Over 15 years of positive feedback worldwide.

TECHNICAL INFORMATION

PROPERTY	RESULTS
Elongation at Break (ASTM D 412)	> 200 %
Tensile Strength (ASTM D 412)	> 1 N/ mm ²
Water Vapor Permeability (ASTM D1653)	> 25 g/m ² /day
Resistance to mechanical damage by static impression	High Resistance
Resistance to mechanical damage by dynamic impression	High Resistance
Resistance to Water Pressure	No Leakage (1m water column, 24h)
Adhesion to concrete (ISO 4642:2023)	>2.0 N/mm ² (concrete surface failure)
Crack Bridging Capability	up to 2 mm crack
Hardness (Shore A Scale) (ASTM D2240)	65
Resistance to Root Penetration	Resistant
Solar Reflectance (SR) (ASTM E903)	0.87
Solar Emittance (ε) (ASTM E408)	0.89
Thermal Resistance (80 C for 100 days)	Passed - No significant changes were observed.
UV accelerated ageing, in the presence of moisture	Passed - No significant changes were observed.
Resistance after water aging	Passed
Service Temperature	-40 °C to +90 °C
Shock Temperature (20min)	200 °C
Rain Stability Time	4 hours
Light Pedestrian Traffic Time	12 hours
Final Curing time	7 days
Chemical Resistance	Good resistance against Acidic and Alkali Solutions (5%), Detergents, Seawater and Oils.

DIRECTIONS FOR USE

SURFACE PREPARATION

Careful surface preparation is essential for optimum finish and durability. The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 25 MPa, cohesive bond strength at least 1.5 MPa. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothened. Any loose surface pieces and grinding dust need to be thoroughly removed.

WARNING: Do not wash surface with water!

REPAIR OF CRACKS AND JOINTS:

The careful sealing of existing cracks and joints before the application is extremely important for long lasting waterproofing results.

Clean concrete cracks and hairline cracks, of dust, residue or other contamination. Prime locally with the REC Primer PU and allow 2-3 hours to dry. Fill all prepared cracks with REC FLEX PU 330 sealant. Then

apply a layer of **REC COAT PU 111**, 200mm wide centered over all cracks and while wet, cover with a correct cut stripe of the REC MEMBRANE Fabric. Press it to soak. Then saturate the REC MEMBRANE Fabric with enough **REC COAT PU 111**, until it is fully covered. Allow 12 hours to cure.

Clean concrete expansion joints and control joints of dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approx. 2:1.

Apply some REC FLEX PU 330 Joint-Sealant on the bottom of the joint only. Then with a brush, apply a stripe layer of **REC COAT PU 111**, 200mm wide centered over and inside the joint. Place the REC MEMBRANE Fabric over the wet coating and with a suitable tool, press it deep inside the joint, until it is soaked and the joint is fully covered from the inside. Then fully saturate the fabric with enough **REC COAT PU 111**. Then place a polyethylene cord of the correct dimensions inside the joint and press it deep inside onto the saturated fabric. Fill the remaining free space of the joint with REC FLEX PU 330 sealant. Do not cover. Allow 12-18 hours to cure.

PRIMING

Prime absorbent surfaces like concrete, cement screed or wood with REC PRIMER PU. Prime surfaces like bitumen, asphalt felts with REC PRIMER 730. Prime non-absorbent surfaces like metal, ceramic tiles and old coatings with AQUA PRIMER. Allow the primer to cure according its technical instructions.

Waterproofing membrane

Stir well before using. Poor the **REC COAT PU 111** onto the primed surface and lay it out by roller or brush, until all surface is covered.

You can use airless spray allowing a considerable saving of manpower.

After 6-12 hours (not later than 48 hours) apply another layer of the **REC COAT PU 111**. For demanding applications, apply a third layer of the **REC COAT PU 111**.

Reinforce always with the REC MEMBRANE Fabric at problem areas, like wall-floor connections, 90o angles, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on the still wet **REC COAT PU 111** a correct cut piece of REC MEMBRANE Fabric, press it to soak, and saturate again with enough **REC COAT PU 111**. For detailed application instructions with the REC MEMBRANE Fabric, contact Technical department of Reckon Chemicals PVT Ltd.

CONSUMPTION

0.2 – 0.8 kg/m² applied in two or three layers.

This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

PACKAGING

REC COAT PU 111 is available in 20 kg and 30 kg packs.

STORAGE

REC COAT PU 111 have a shelf life of 6 months from date of manufacture if stored at temperatures between 2°C and 35°C. If these conditions are exceeded, Reckon Technical Department should be contacted for advice.

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