

Garlathane 250



PRODUCT DESCRIPTION

GARLATHANE 250 is a premium, liquid-applied, highly permanent elastic, cold applied and cold curing, one component polyurethane membrane used for long-lasting waterproofing.

The GARLATHANE 250 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.

PRODUCT ADVANTAGES

- Simple application (roller or airless spray)
- When applied forms seamless membrane without joints
- Resistant to root penetration, so it can be used in green roofs
- Crack-bridging up to 2mm
- Provides water vapour permeability
- Provides excellent thermal resistance
- Provides excellent weather and UV resistance
- Maintains its mechanical properties over a temperature span of -40°C to +90°C
- Provides excellent adhesion to almost any type of surface
- Resistant to detergents, oils, seawater and domestic chemicals
- If the membrane gets mechanically damaged, it can be easily repaired locally within minutes
- Cold applied application with no use of naked flame

USES

- Waterproofing of Roofs
- Waterproofing of Balconies, Terraces and Verandas
- Waterproofing of Pedestrian traffic Decks
- Waterproofing of Green Roofs
- Waterproofing over old bitumen felts, mastic asphalt, EPDM and PVC membranes and old acrylic coatings.
- Waterproofing and protection of concrete constructions, for example Bridge-Decks, Tunnels, Stadium Stands, Car Parks, etc.

COVERAGE RATES

1.8 – 2.5 kg/m² applied in two or three layers.

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

APPLICATION

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 will affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 25MPa, cohesive bond strength at least 1.5MPa. 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 smoothed. Any loose surface pieces and grinding dust need to be thoroughly removed.

WARNING: Do not wash surface with water immediately prior to coating application. If pressure washing the substrate adequate time must be allowed for the surface to completely dry.

Repair of cracks and joints

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

Clean concrete cracks and hairline cracks of dust, residue or other contamination. Prime locally with the Garland PU Primer and allow 2-3 hours to dry. Fill all prepared cracks with Garland TS-2136 PU sealant. Then apply a layer of GARLATHANE 250, 200mm wide centred over all cracks and while wet, cover with a correctly cut strip of GARLATHANE Fabric. Press the reinforcing fabric into place, then saturate the GARLATHANE Fabric with enough GARLATHANE 250, until it is fully saturated. 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 Garland TS-2136 PU Sealant on the bottom of

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the joint only. Then with a brush, apply a strip layer of GARLATHANE 250, 200mm wide centred over and inside the joint. Place the GARLATHANE 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 reinforcing fabric with enough GARLATHANE 250. Then place a polyethylene rod backer 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 Garland TS-2136 PU sealant. Do not cover. Allow 12-18 hours to cure.

Priming

Prime absorbent surfaces like concrete, cement screed or wood with Garland PU Primer or with GARLATHANE AQUA PRIMER. Prime bitumen surfaces, asphalt and felts with GARLATHANE AQUA PRIMER. Prime non-absorbent surfaces like metal, ceramic tiles and old coatings with GARLATHANE AQUA PRIMER. Allow the primer to cure following instructions on the technical data sheet.

Waterproofing membrane

Stir well before using. Pour the GARLATHANE 250 onto the primed surface and spread out by roller until the required surface is covered. You can use airless spray equipment

allowing a considerable saving of manpower. After 12-18 hours (not later than 48 hours) apply another layer of the GARLATHANE 250. For demanding applications, apply a third layer of the GARLATHANE 250.

Always reinforce with GARLATHANE Fabric over the entire surface. Use 50-100mm strip overlapping.

ATTENTION: Do not apply the GARLATHANE 250 over 0.6 mm thickness (dry film) per layer. For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish. Do not apply below 5°C.

Finishing Layer

Apply one or two layers of the GARLATHANE 400 Top-Coat over the GARLATHANE 250. If a heavy duty, abrasion resistant surface is desired (e.g. Public Pedestrian Deck), apply two layers of the GARLATHANE 420 Top-Coat. For the top coat application procedures, please consult their technical instructions.

WARNING: The GARLATHANE system is slippery when wet. In order to avoid excessive slippage during wet weather, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface.

Technical Data	Results	Test Method
Elongation at Break	> 800 %	ASTM D 412 / DIN 52455
Tensile Strength	> 4 N/ mm ²	ASTM D 412 / DIN 52455
Water Vapour Permeability	> 25 gr/m ² /day	ISO 9932:91
Resistance to mechanical damage by static impression	High Resistance (class:P3)	EOTA TR-007
Resistance to mechanical damage by dynamic impression	High Resistance (class:P3)	EOTA TR-006
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	>2,0 N/mm ² (concrete surface failure)	ASTM D 903
Hardness (Shore A Scale)	65	ASTM D 2240 (15")
Resistance to Root Penetration	Resistant	UNE 53420
Solar Reflectance (SR)	0.87	ASTM E903-96
Solar Emittance	0.89	ASTM E408-71
Thermal Resistance (80oC for 100 days)	Passed - No significant changes	EOTA TR-011
UV accelerated ageing, in the presence of moisture	Passed - No significant changes	EOTA TR-010
Resistance after water aging	Passed	EOTA TR-012
Hydrolysis (5% KOH, 7days cycle)	No significant elastomeric change	-
Construction Material Fire class	B2	DIN 4102-1
Resistance to Flying Sparks and Radiating Heat	Passed	DIN 4102-7
Service Temperature	-30°C to +90°C	-
Shock Temperature (20min)	200°C	-
Light Pedestrian Traffic Time	12 hours	Conditions: 20°C, 50% RH
Final Curing time	7 Days	Conditions: 20°C, 50% RH
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

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