

MARISEAL[®] 250

Liquid-Applied, One Component Polyurethane Waterproofing Membrane

Product Description

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

The MARISEAL[®] 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.

Advantages

- Simple application (roller or airless spray).
- When applied forms seamless membrane without joints.
- UV resistant.
- Resistant to water. Resistant to frost.
- Resistant to root penetration, so it can be used in green roofs.
- Crack-bridging up to 2mm, even at -10° C.
- Provides excellent thermal resistance, it never turns soft.
- When applied forms seamless membrane without joints.
- As it is pure polyurethane, it can continually contact with water.
- Waterproofs old bitumen-, asphalt felts by covering them, without the need to remove them prior to application.
- Provides high sun reflectivity, contributing to thermoinsulation.
- Maintains its mechanical properties over a temperature span of -40° C to +90° C.
- Provides excellent adhesion to almost any type of surface.
- The waterproofed surface can be used for domestic and public pedestrian and vehicular traffic.
- Resistant to detergents, oils, seawater and domestic chemicals.
- Even if the membrane gets mechanically damaged, it can be easily repaired locally within minutes.
- ANTIROOT certified; roots piercing resistance.

Consumption

1,4 – 2,5 kg/m² con 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.

(In mesh application, you may need extra 500-700 gr consumption.)

Uses

- Waterproofing of roofs, balconies, terraces and concrete curtains.
- Waterproofing of wet areas (under-tile) in bathrooms, swimming pools, kitchens etc.
- Protection of polyurethane foam insulation.
- Waterproofing of flowerbeds and planter boxes.
- Waterproofing of water storage and water distribution channels.
- Waterproofing and protection of concrete constructions like bridge decks, tunnels etc.
- Waterproofing of metal surfaces.

Packaging and Colors

MARISEAL[®] 250 is supplied in white and grey in 25 kg, 15 kg and 6 kg.

Certifications



The MARISEAL[®] 250 was tested by the German state testing institute for construction materials MPA-Braunschweig according the European Union Directive for liquid-applied roof waterproofing kits ETAG 005 and was found conforming.

The MARISEAL[®] 250 was certified by the German state Institute for construction techniques DIBt—Berlin with the European Technical Assessment (ETA) and with the CE-mark and certification according to the EOTA (European Organization of Technical Approval). The European Technical Assessment (ETA) is valid for two levels of use (W2 and W3) depending on the applied thickness.

The MARISEAL[®] 250 was additionally tested and approved by various laboratories in different countries around the world.

Technical Data

PROPERTY	RESULTS	TEST METHOD
Elongation at Break	> 800 %	ASTM D 412 / DIN 52455
Tensile Strength	> 4 N/ mm ²	ASTM D 412 / DIN 52455
Water Vapor 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
Crack Bridging Capability	up to 2 mm crack	EOTA TR-008
Hardness (Shore A Scale)	65-70	ASTM D 2240 (15")
Resistance to Root Penetration	Resistant	UNE 53420
Solar Reflectance (SR)	0.87	ASTM E903-96
Solar Emittance (e)	0.89	ASTM E408-71
Thermal Resistance (80°C 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	Inhouse Lab
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	Inhouse Lab
Shock Temperature (20min)	200°C	Inhouse Lab
Rain Stability Time	3-4 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	18-24 hours	
Final Curing time	7 days	
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

Application

Surface Preparation: 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%. 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 the surface with water.

Priming: Prime absorbent surfaces like concrete, cement screed or wood with MARISEAL® 710 or with MARISEAL® AQUA-PRIMER. Prime non-absorbent surfaces like metal, ceramic tiles and old coatings with MARISEAL® AQUA-PRIMER.

Waterproofing membrane: Stir well before using. Pour the MARISEAL® 250 onto the primed surface and lay it out by roller or brush, until all surface is covered. After 12 hours (not later than 36 hours) apply another layer of the MARISEAL® 250. If desired apply a third layer of the MARISEAL® 250. Reinforce always with the MARISEAL® FABRIC at problem areas, like wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon) etc. In order to do that, apply on the still wet MARISEAL® 250 a correct cut piece of MARISEAL® FABRIC, press it to soak and saturate again with enough MARISEAL® 250.

Finishing: If a color stable and chalking-free surface is desired, apply one or two layers of the MARISEAL® 400 Top-Coat over the MARISEAL® 250. The application of the MARISEAL® 400 Top-Coat, is especially required, if a dark final color, is desired. (e.g. red, grey, green, etc.). If a heavy duty, abrasion resistant surface is desired (e.g. car parking), apply two layers of the MARISEAL® 420 Top-Coat.

WARNING: After 36-48 hours the material is applied, air temperature should be above 8°C, it should not be rainy or snowy and should be applied with considering the possibility of raining.

Storage

Pails should be stored in dry and cool rooms for up to 12 months. Protect the material against moisture and direct sunlight. Storage temperature: 5°-30°C. Products should remain in their original, unopened containers.

Safety Measures

Pails should be stored in MARISEAL® 250 contains isocyanates. It is flammable. Keep away from ignition sources. Adequate ventilation is required during the application. Please study the Safety Data Sheet.

Our technical advice for use, whether verbal, written or in tests, is given in good faith and reflect the current level of knowledge and experience with our products. When using our products, a detailed object-related and qualified inspection is required in each individual case in order to determine whether the product and /or application technology in question meets the specific requirements and purposes. We are liable only for our products being free from faults; correct application of our products therefore falls entirely within your scope of liability and responsibility. We will, of course, provide products of consistent quality within the scope of our General Conditions of Sale and Delivery. Users are responsible for complying with local legislation and for obtaining any required approvals or authorizations. Values in this technical data sheet are given as examples and may not be regarded as specifications. For product specifications contact our R+D department. The new edition of the technical data sheet supersedes the previous technical information and renders it invalid. It is therefore necessary that you always have to hand the current code of practice.