MARISEAL® 300

Liquid-Applied, Two Component Polyurethane Waterproofing Membrane

Product Description

MARISEAL® 300 is a liquid-applied, solvent-free, hard-elastic, cold applied and cold curing, two component polyurethane membrane used for long-lasting waterproofing and protection. Cures by reaction (cross linking) of the two components.

Advantages

- UV resistant.
- Certified for safe use in potable (drinking) water reservoirs.
- When applied forms seamless membrane without joints or leak possibilities.
- As it is pure polyurethane, it can continually contact with water.
- Resistant to cold water, warm water and frost.
- Maintains its mechanical properties over a temperature span of -30°C to +90°C.
- Remains elastic even at low (frost) temperature.
- Full surface adherence.
- Odor free.
- The waterproofed surface can be walked on.
- Low cost.

Packaging and Colors

MARISEAL® 300 A+B is supplied in off-white, light and dark blue in 6+1 and 15+2,5 kg pails.

Consumption

1,5 - 2,5 kg/m^2 applied in two or three layers fully reinforced. This coverage is based on practical application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature, humidity, application method and finish required can alter consumption.

Uses

- Waterproofing of drinking water supply channels and pipes.
- Waterproofing of drinking water storage tanks and reservoirs.
- Odorless waterproofing of wet areas (under-tile) in bathrooms, swimming pools, kitchens, etc.
- Coating and waterproofing of outdoor swimming pool and ornamental ponds.
- Used for waterproofing of surfaces in direct contact with potable (drinking) water.

Certifications

The MARISEAL® 300 is certified according the current European and German legislation for use on surfaces in direct contact with potable (drinking) water, and potable (drinking) water storage tanks. The MARISEAL® 300 conforms with the German Standard (Kunststoffe im Lebensmittelverkehr, par. 1.3.2.5.2), the Greek Standard (Codex Aliimentarius, articles. 21,21a,24,26,28) and the current relevant European Union directives. Tests conducted following the ELOT EN 1484, prEN 12873-1, prEN 14395-1 standards.

Technical Data

PROPERTIES	RESULTS	TEST METHOD
Composition	Polyurethane Resin + Hardener	
Mixing Ratio	A+B = 6:1 by weight	
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Elongation at Break	>100%	ASTM D412
Adhesion to concrete	>2,0 N/mm ^{2}	ASTM D 903
Hardness (Shore A Scale)	70 + 5	ASTM D 2240
Solids Content	100%	CALCULATED
UV accelerated ageing, in the presence of moisture	Passed - No significant changes	EOTA TR-010
Hydrolysis (5% KOH, 7days cycle)	No significant elastomeric change	Inhouse Lab
Service Temperature	-40°C to +90°C	Inhouse Lab
Tack Free Time	6-8 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	24 hours	
Final Curing time (ponding test)	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 smoothened. Any loose surface pieces and grinding dust need to be thoroughly removed. WARNING: Do not wash the 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 MARISEAL® 710 Primer and allow 2-3 hours to dry. Fill all prepared cracks with BILIZO-FLEX® PU 30 sealant. Then apply two layers of MARISEAL® 300, 200mm wide centered over all cracks.

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 BILIZO-FLEX® PU 30 Joint-Sealant on the bottom of the joint only. Then with a brush, apply a stripe layer of MARISEAL® 300, 200mm wide centered over and inside the joint. 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 BILIZO-FLEX® PU 30 sealant. Allow 12 hours to cure.

Priming

Prime surfaces, like concrete, cement screed, metal and ceramic tiles with enough MARISEAL® 750 primer (min. 150-200 gr/m2). Allow 12 hours to cure.

Mixing

Stir MARISEAL® 300 Component A well before using. Then add the MARISEAL® 300 Component B at the stipulated mixing ratio. MARISEAL® 300 Component A and Component B should be mixed by low speed mechanical stirrer, for about 3–5 min.

ATTENTION: The mixing of the components has to be effected very thoroughly, especially on the walls and bottom of the pail until the mixture becomes fully homogeneous.

Waterproofing Membrane

Poor the entire MARISEAL® 300 A+B mixture, onto the primed and prepared surface and lay it out by roller or brush, until all surface is covered.

Please ensure consumption within the pot life of the product (~30min). Please do not leave the mixed MARISEAL® 300 A+B coating in the pail for long, because the exothermic reaction accelerates the curing and will shorten the pot-life. Directly after mixing poor the mixture on the surface on in smaller pails to minimize the exothermic reaction. After 12 hours - but not later than 36 hours –apply another layer of the MARISEAL® 300, by using roller or brush.

RECOMMENDATION: For best results, the temperature during application and cure should be between 5°C and 30°C. Low temperatures retard cure while high temperature speed up curing. High humidity may affect the final finish.

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 9 months. Protect the material against moisture and direct sunlight. Storage temperature: 5°-30°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Safety Measures

MARISEAL® 300 B contains isocyanates. Hands and eyes must be protected with gloves and protective glasses. Case of eye contact, rinse eyes with plenty of water for the material and consult a doctor immediately. Adequate ventilation is required during the application. NOTE: Keep out of reach of children. Please study the Safety Data sheet.