MARISEAL®300

Liquid-applied Polyurethane Waterproofing Membrane Solvent-free

TECHNICAL DATA SHEET
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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.

Product Information

- Two-component, hard-elastic, cold applied and cold curing

Packaging

- 6+1 / 15+2,5 kg metal pails

Color

- Off White / Blue / Grey
- Other RAL colours on demand. Due to the sensitivity of aromatic polyurethane to UV rays, the applied coating might yellow and fade on the surface. This change in appearance does not modify its mechanical properties or leak tightness

Shelf Life

- 12 months from date of production

Storage Conditions

- 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°-35°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Advantages

- Tested for safe use in potable (drinking) water reservoirs by NSF
- When applied forms seamless membrane without joints or leak possibilities
- Resistant to cold water, warm water and frost
- Maintains its mechanical properties over a temperature span of -30°C to +90°C (not suitable for tanks and reservoirs with water over +60°C)
- Remains elastic even at low (frost) temperature
- Odor free
- Full surface adherence
- The waterproofed surface can be walked on

Uses

- Drinking Water Tanks and Reservoirs (fully Reinforced)
- Drinking Water Supply Channels (fully Reinforced)
- Drinking Water Pipes
- Swimming Pools (under tiles)

Consumption

- 2,0- 2,5 kg/m² in more than two 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.

Certifications

EN1504-2: Surface protection for concrete.
Performance determined in the system (MARISEAL® 750, MARISEAL® 300)

MARISEAL® 300 is tested according to the BS 6920:2014 by the NSF Laboratory in the United Kingdom, for use on surfaces in direct contact with potable (drinking) water, and potable (drinking) water storage tanks. MARISEAL® 300 is certified according to the Singapore Standard SS 375:2001 "Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water" and was found conforming.

Technical Data*

PROPERTY	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	>60% (without reinforcement)	ASTM D 412
Adhesion to concrete	>2,0 N/mm ²	EN 1542
Pot life	30min@20ºC	Inhouse Lab
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	-30ºC to +90ºC (Not suitable for wet load over +60ºC)	Inhouse Lab
Tack Free Time	6-8 hours	Conditions: 20ºC, 50% RH
Light Pedestrian Traffic Time	24 hours	Conditions: 20ºC, 50% RH
Final Curing time (ponding test)	7 days	Conditions: 20ºC, 50% RH
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils. Not suitable for contact with industrial wastes.	

EPD verified

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 may harmfully 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 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 MARISEAL® 710 Primer and allow 2-3 hours to dry. Fill all prepared cracks with MARIFLEX® PU 30 sealant. Then apply a layer of MARISEAL® 300, 200mm wide centered over all cracks and while wet, cover with a correct cut stripe of the MARISEAL® FABRIC. Press it to soak. Then saturate the MARISEAL® FABRIC with enough MARISEAL® 300, 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 MARIFLEX® 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. Place the MARISEAL® 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 MARISEAL® 300. 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 MARIFLEX® PU 30 sealant. Do not cover. Allow 12 hours to cure.

Priming

Prime very absorbent surfaces like concrete, cement screed with MARISEAL® 710 or with MARISEAL® AQUA PRIMER. Prime non-absorbent surfaces like metal, with MARISEAL® AQUA PRIMER. Prime surfaces with enough MARISEAL® 750 primer for Drinking Water System (min. 250 – 300 gr/m²). Allow 12 hours to cure.

Mixing of Components

Stir MARISEAL® 300 Component A well before using. Then add MARISEAL® 300 Component B at the correct 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.

Application of Waterproofing membrane

Pour 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. Reinforce with MARISEAL® FABRIC at problem areas, like wall-floor connections, 90° angles, pipe-outlets, waterspouts (siphon), etc. We recommend reinforcement of the entire surface, with MARISEAL® FABRIC. In order to do that, apply on the still wet MARISEAL® 300 a correct cut piece of MARISEAL® FABRIC, press it to soak, and saturate again with enough MARISEAL® 300. Use 5-10cm stripe overlapping. For detailed application instructions with MARISEAL® FABRIC, contact our technical department.

After 12-18 hours - but not later than 48 hours – apply another layer of MARISEAL® 300, by using roller or brush. For demanding or under-tile applications apply a third layer of MARISEAL® 300. If MARISEAL® 300 is to be covered with ceramic tiles, fully saturate with oven-dry silica sand (corn-size 0,4-0,8mm) the last (third) layer while still wet. This saturation will create an adhesion bridge to the tile adhesive that will follow.

ATTENTION: Please ensure consumption within the pot life of the product (~30min@20°C)! Please do not leave 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 pour the mixture on the surface on in smaller pails to minimise the exothermic reaction.

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

WARNING: MARISEAL® 300 and/or MARISEAL® SYSTEM is slippery when wet. In order to avoid slipperiness during wet days, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface. Please contact our technical Dept. for more information.

Safety measures

MARISEAL® 300 contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data Sheet.
PROFESSIONAL USE ONLY

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