Maris Polymers®
POLYURETHANE SYSTEMS

CONSTRUCTION

MARISEAL® 330

TECHNICAL DATA SHEET

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Liquid-applied Polyurea waterproofing membrane
Hand applied

Product description

The MARISEAL® 330 is a liquid-applied, solvent-free, hard-elastic, cold applied and cold curing, two component polyurea membrane used for long-lasting waterproofing and protection.

Cures by reaction (cross linking) of the two components

Advantages

- When applied forms seamless membrane without joints or leak possibilities.
- Resistant to water and frost.
- Long Pot life that enables manual (by hand) application.
- Does not need special spray machine to be applied.
- Maintains its mechanical properties over a temperature span of -30°C to +90°C.
- Remains elastic even at low (frost) temperature.
- Full surface adherence.
- The waterproofed surface can be walked on.

Uses

- Waterproofing of Roofs.
- Waterproofing of Terraces.
- Waterproofing of Balconies.
- Waterproofing of Wet Areas.
- Waterproofing of Pedestrian Decks.
- Waterproofing and Protection of Concrete surfaces.

Consumption

1,2 – 2,4 kg/m^2 applied in one or two layers.
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.

Colors

The MARISEAL® 330 is supplied in gray.
Due to the sensitivity of polyurethane to UV rays, light shades change color. This change in appearance does not modify their mechanical properties or leak tightness.

Technical Data *

PROPERTY	RESULTS	TEST METHOD
Composition	Polyurea Resin + Hardener	
Mixing Ratio	A+B = 1:2 by weight	
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Elongation at Break	>400%	ASTM D 412
Adhesion to concrete	>7,0 N/mm ^{2}	ASTM D 903
Hardness (Shore A Scale)	80 ± 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	-30°C to +90°C	Inhouse Lab
Pot Life	40 minutes	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	24-48 hours	
Final Curing time (ponding test)	7 days	
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

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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® 330, 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® 330, 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® 330, 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® 330. 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 surfaces, like concrete, cement screed, metal, and ceramic tiles with enough MARISEAL® 750 primer (min. 250 – 330 gr/m2). Allow 12-18 hours to cure.

Mixing

Stir MARISEAL® 330 Component A well before using. Then add the MARISEAL® 330 Component B at the stipulated mixing ratio. MARISEAL® 330 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® 330 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 (~30-40min)! Please do not leave the mixed MARISEAL® 330 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 minimise the exothermic reaction.

Reinforce with MARISEAL® FABRIC at problem areas, like wall-floor connections, pipe-outlets, waterspouts (siphon), etc. In order to do that, apply on the still wet MARISEAL® 330 a correct cut piece of MARISEAL® FABRIC, press it to soak, and saturate again with enough MARISEAL® 330. For detailed application instructions with the MARISEAL® FABRIC, contact our R+D department.

After 12-18 hours, apply another layer of the MARISEAL® 330, by using roller or brush. For demanding applications apply a third layer.

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: The MARISEAL® 330 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 R+D Dept. for more details.

Packaging

MARISEAL® 330 A+B is supplied in 5+10 kg pails. 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°-330C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Safety measures

MARISEAL® 330 contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data sheet.
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