

# MARISEAL® 270

## Liquid-applied polyurethane waterproofing membrane

### Product description

MARISEAL® 270 is a liquid-applied, highly permanent elastic, cold applied and cold curing, one component, pure polyurethane membrane used for long-lasting waterproofing.

Cures by reaction with ground and air moisture.

### Advantages

- Simple application (roller, brush or airless spray).
- When applied forms seamless membrane without joints or leak possibilities.
- Resistant to water.
- Maintains its mechanical properties over a temperature span of -20°C to +80°C.
- Resistant to frost.
- Provides water vapor permeability.
- Full surface adherence without any additional anchoring.
- The waterproofed surface can be walked on.
- No low-cost BITUMEN extenders present in the product
- Low cost

### Uses

- Waterproofing of Balconies and Terraces (under-tile)
- Waterproofing of Wet Areas (under-tile) in Bathrooms, Kitchens, etc
- Waterproofing of Foundations

### Consumption

1.2 – 1.5 kg/m<sup>2</sup> in 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® 270 is supplied in off-white

### Technical data

| PROPERTY                 | RESULTS  | TEST METHOD   |
|--------------------------|--|---|
| Composition              | Polyurethane high-solids pre-polymer   | FTIR verification   |
| Elongation at Break      | >700 %   | ASTM D 412  |
| Tensile Strength         | >4 N/mm <sup>2</sup>   | ASTM D 412  |
| Water Vapor Permeability | >17 gr/m <sup>2</sup> .day   | ASTM E96 : 2000   |
| Water tightness          | No Leak.<br>No absorption of water was observed on the underside of substrate                  | Adopted DIN EN 1928,<br>Cross-reference ASTM-C1185 : 2003 section 11. |
| Adhesion to concrete     | > 1,5 N/mm <sup>2</sup> (concrete failure)   | ASTM D 903  |
| Hardness (Shore A Scale) | 70 + 5   | ASTM D 2240   |
| Application Temperature  | 5 <sup>o</sup> C to 35 <sup>o</sup> C  | Conditions: 20°C, 50% RH  |
| Tack Free Time           | 6-8 hours  |   |
| Light Pedestrian Traffic | 12-18 hours  |   |
| Final Curing time        | 7 days   |   |
| Chemical Properties      | Good resistance against acidic and basic solutions (10%), domestic detergents, seawater, oils. |   |

## Application

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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%. 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!

### 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® 270, 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® 270, 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® 270, 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® 270. 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 non-absorbent surfaces like metal, ceramic tiles and old coatings with MARISEAL® AQUA COAT primer.

### Waterproofing membrane

Stir well before using. Pour the MARISEAL® 270 onto the primed surface and lay it out by roller or brush, until all surface is covered. You can use airless spray allowing a considerable saving of manpower.

Reinforce with MARISEAL® FABRIC at problem areas, like wall-floor connections, light-domes, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on the still wet MARISEAL® 270 a correct cut piece of MARISEAL® FABRIC, press it to soak, and saturate again with enough MARISEAL® 270. For detailed application instructions with the MARISEAL® FABRIC, contact our R+D department.

After 12 hours - but not later than 36 hours –apply another layer of the MARISEAL® 270, by using roller, brush or airless spray.

If the MARISEAL® 270 is to be covered with ceramic tile, sprinkle suitable aggregates onto the still wet coating (last layer) to create a surface with grip.

**ATTENTION:** Do not apply the MARISEAL® 270 over 0.5 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.

**ATTENTION:** The MARISEAL® 270 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

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MARISEAL® 270 is supplied in 25 kg, 15 kg, 6 kg, 1kg 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<sup>o</sup>-30<sup>o</sup>C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

### Safety measures

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MARISEAL® 270 contains isocyanates. See information supplied by the manufacturer. 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.