

## MARISEAL® 270W

TECHNICAL DATA SHEET

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### Liquid-applied Modified Polyurethane Wet-Areas Waterproofing Membrane, Water-Based

CONSTRUCTION

#### Product Description

MARISEAL® 270W is a liquid-applied, highly permanent elastic, modified polyurethane water based membrane used for long-lasting waterproofing, in wet areas for under tile applications.

MARISEAL® 270W consists of flexible, water-dispersed modified polyurethane resins, with high permanent elongation.

#### Advantages

- Simple application (ready to use)
- Low odor
- Forms a hydrophobic, 100% waterproofing, seamless membrane without joints or leak possibilities, that protects old and new structures efficient and on a long-term basis
- Includes a drying indicator. When the product is applied it shows a blue color but when it dries it turns black, useful for next layer application timing
- Maintains its mechanical properties over a temperature span of -20°C to +70°C
- Provides water vapor permeability
- Fast drying
- Full surface adherence without any additional anchoring
- Even if the membrane gets damaged, it can be easily repaired locally within minutes

#### PRODUCT INFORMATION

**Chemical Base** One-component, cold applied and cold curing water-based aromatic polyurethane

**Packaging** 1/4/15/25 kg plastic pails

**Colour** Black

**Shelf Life** 18 months from date of production

#### Main Uses

Waterproofing of Wet Areas (under-tile applications) in:

- Bathrooms
- Kitchens
- Auxiliary rooms, etc

#### Consumption

1,8 kg/m<sup>2</sup> in more than two layers.

This coverage is based on EN14891 for application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.



## Technical data

PROPERTY	RESULTS	TEST METHOD
Elongation at Break	350 %	ASTM D 412
Tensile Strength	>2,5 N/ mm <sup>2</sup>	ASTM D 412
Thermal Resistance (80°C for 100 days)	Passed - No significant changes	EOTA TR-011
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	1.60 N/mm <sup>2</sup>	EN 14891
Crack bridging (23 °C)	3,7 mm	EN 14891
Service Temperature	-20°C to +70°C	Inhouse Lab
Tack Free Time	6 hours	
Final Curing time	7 days	Conditions: 20°C, 50% RH

## Certifications

**EN14891:** Liquid-applied water impermeable product, type RM for installations on walls and floors, beneath ceramic tiling (bonded with C2 adhesive in accordance with EN 12004) (1.8kg/m<sup>2</sup>)



Essential characteristics	Measured Performance	Standard Limits	Test standard
Initial tensile adhesion strength	1.6 N/mm <sup>2</sup>	≥ 0,5 N/mm <sup>2</sup>	EN 14891, Clause A6.2
Crack bridging ability under standard conditions	3.74 mm	≥ 0,75 mm	EN 14891, Clause A.8.2
Crack bridging ability at low temperature (-5°C)	1.99 mm	≥ 0,75 mm	EN 14891, Clause A.8
Crack bridging ability at low temperature (-20°C)	0.89 mm	≥ 0,75 mm	EN 14891, Clause A.8
Tensile adhesion strength after heat ageing	1.4 N/mm <sup>2</sup>	≥ 0,5 N/mm <sup>2</sup>	EN 14891, Clause A6.5
Tensile adhesion strength after water contact	0.8 N/mm <sup>2</sup>	≥ 0,5 N/mm <sup>2</sup>	EN 14891, Clause A6.4
Tensile adhesion strength after contact with lime water	0.8 N/mm <sup>2</sup>	≥ 0,5 N/mm <sup>2</sup>	EN 14891, Clause A6.9
Tensile adhesion strength after freeze-thaw cycles	0.7 N/mm <sup>2</sup>	≥ 0,5 N/mm <sup>2</sup>	EN 14891, Clause A6.6

## 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 8%. 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.

### 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, hairline cracks and connection joints of dust, residue or other contamination. Fill all prepared cracks/joints with MARIFLEX® PU 30 sealant. Widen joints if necessary. Then apply a layer of MARISEAL® 270W, 200mm wide centered over all cracks and while wet, cover with a correct cut stripe of MARISEAL® FABRIC. Press it to soak. Then saturate MARISEAL® FABRIC with enough MARISEAL® 270W, until it is fully covered. Allow 18 hours to cure.

### Priming

Prime absorbent and brittle surfaces like concrete, cement screed, mortar, plaster, wood with MARISEAL® 270W diluted with 15-20% of clean water. Allow the primer coat to cure for 1-3 hours (depending on temperature).



## Waterproofing membrane

Stir well before using. Pour MARISEAL® 270W onto the primed surface and lay it out by roller or brush, until all surface is covered.

Reinforce always with MARISEAL® FABRIC at problem areas, like wall-floor connections, pipes, waterspouts (siphon), etc. We recommend reinforcing with MARISEAL® FABRIC at the entire surface to be waterproofed. Use 5-10cm stripe overlapping.

In order to do that, apply on the still wet MARISEAL® 270W a correct cut piece of MARISEAL® FABRIC, press it to soak, and saturate again with enough MARISEAL® 270W. For detailed application instructions with MARISEAL® FABRIC, contact our R+D department. We recommend reinforcement of the entire surface, with MARISEAL® Fabric. Use 5-cm stripe overlapping.

After 3-6 hours (depending on temperature) apply another layer of MARISEAL® 270W. For demanding under-tile applications, apply a third layer of MARISEAL® 270W. If MARISEAL® 270W is to be covered with ceramic tiles, **we recommend full saturation 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.

**WARNING:** Do not apply MARISEAL 270W in temperatures below 5°C or when dew, rain or frost is imminent in the next 24 hours. For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperatures retard cure while high temperature speeds up curing. High humidity may affect the final finish.

**WARNING:** MARISEAL® 270W and/or MARISEAL SYSTEM is slippery when wet. In order to avoid slipperiness, sprinkle suitable aggregates onto the still wet coating to create an anti-slip surface. Please contact our R+D Dept. for more information.

**WARNING:** MARISEAL® 270W is not suitable for UV exposure, so make sure that it is always applied concealed (covered) under ceramic tiles, etc.

## Storage Conditions

MARISEAL® 270W pails should be stored in dry and cool rooms. Protect the material against moisture, frost 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.

## Safety measures

Keep away from children. Do not used empty containers for food storage. See information supplied by the manufacturer. Please study the Safety Data Sheet.

Our technical advice for use, whether verbal or written, 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 may guarantee only that our products are compliant with their technical specification; correct application of our products therefore falls entirely within your scope of liability and Users are responsible, in any case, for complying with local legislation and for obtaining any required approvals or authorizations, when necessary, either for their purchase and/or for their use. 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.

\* All values represent typical values and are not part of the product specification.

