

MARISEAL® 270W

Liquid-applied,
water-based hybrid
polyurethane membrane
for the waterproofing of
wet-areas

TECHNICAL DATA SHEET
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Product Description

MARISEAL® 270W is a liquid-applied, highly permanent elastic, hybrid water-based polyurethane membrane used for long-lasting waterproofing, in wet areas for under tile applications. Consists of flexible, water-dispersed hybrid polyurethane resins, with high permanent elongation.

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Product Information

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

Packaging

- 1/4/20 kg plastic pails

Color

- Black

Shelf Life

- 18 months from date of production

Storage Conditions

- Pails should be stored in dry and cool rooms. Protect the material against moisture, frost and direct sunlight. Storage temperature: 5°C-35°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

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

■ Uses

Waterproofing of wet areas (under-tile applications) in:

- Bathrooms
- Kitchens
- Auxiliary rooms, etc.

■ Consumption

- 1,80 kg/m² including priming.
- This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.
Do not apply more than 0,90 kg/m²/layer.

■ Certifications



European Technical Approval: ETA 23/0264

EAD 030352-00-0503: Liquid-applied watertight covering kits for wet room floors and/or walls

	Product	Brand Name	Consumption
System 1	Waterproofing Membrane	MARISEAL® 270W	≥ 1,8 kg/m ² (Priming included*)
	Silica Sand (0,4-0,8 mm)	---	Saturation
	Tile Adhesive C1	**	---
System 2	Waterproofing Membrane	MARISEAL® 270W	≥ 1,8 kg/m ² (Priming included*)
	Tile Adhesive C2	**	---

* MARISEAL® 270W was used as a primer diluted with 20% clean water

** Complying with EN 12004 Adhesives for ceramic tiles



EN 14891: Liquid applied water impermeable products for use beneath ceramic tiling bonded with adhesives (Type RM). Bonded with C1 tile adhesive in accordance with EN 12004.

Total consumption of MARISEAL® 270W: 1,80 kg/m²

Characteristics	Measured performance	Standard limits	Test standard
Initial tensile adhesion strength	1,6 N/mm ²	≥ 0,5 N/mm ²	EN 14891, Clause A.6.2
Tensile adhesion strength after water contact	0,8 N/mm ²	≥ 0,5 N/mm ²	EN 14891, Clause A.6.4
Tensile adhesion strength after heat ageing	1,4 N/mm ²	≥ 0,5 N/mm ²	EN 14891, Clause A.6.5
Tensile adhesion strength after freeze-thaw cycles	0,7 N/mm ²	≥ 0,5 N/mm ²	EN 14891, Clause A.6.6
Tensile adhesion strength after contact with lime water	0,8 N/mm ²	≥ 0,5 N/mm ²	EN 14891, Clause A.6.9
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.8.3
Crack bridging ability at very low temperature (-20°C)	0,89 mm	≥ 0,75 mm	EN 14891, Clause A.8.3



■ Technical Data*

PROPERTY	RESULTS	TEST METHOD
Elongation at break	350%	ASTM D 412
Tensile strength	> 2,5 N/mm ²	ASTM D 412
Thermal resistance (80°C for 100 days)	Passed - No significant changes	EOTA TR-011
Resistance to water pressure	No Leak (1 m water column, 24 hrs.)	DIN EN 1928
Service temperature	-20°C to +70°C	Inhouse Lab
Tack free time	6 hours	Conditions: 20°C, 50% RH
Final curing time	7 days	Conditions: 20°C, 50% RH



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 8%. New concrete structures need to cure 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:

For long lasting waterproofing results, it is fundamental to carefully seal existing cracks and joints before the application.

Widen cracks and joints if necessary. Clean concrete cracks, hairline cracks and joints of dust, residues or other contaminations. Fill all prepared cracks/joints with MARIFLEX® PU 30 sealant. Then apply a layer of MARISEAL® 270W, 200 mm wide centered over all cracks/joints and while wet, cover with a 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 surfaces like concrete, cement screed, mortar, plaster, plasterboard, and wood with MARISEAL® 270W diluted with clean water at a ratio of 15-20% by weight. Allow the primer coat to cure for 1-3 hours (depending on the temperature).

Waterproofing membrane

Stir well before using. Apply MARISEAL® 270W onto the primed surface by roller or brush, until all surface is covered.

Always reinforce with MARISEAL® FABRIC the difficult areas, like wall-floor connections, pipes, waterspouts (siphon), etc. For demanding applications, we recommend reinforcing with MARISEAL® FABRIC the entire surface to be waterproofed.

To do this, apply a correctly cut piece of MARISEAL® FABRIC onto the still wet MARISEAL® 270W, press it to ensure it soaks, and then saturate it again with enough MARISEAL® 270W. For detailed application instructions, please contact our technical department.

After 3-6 hours (depending on temperature) apply the next layer of MARISEAL® 270W and continue this process as needed.

If using tile adhesive type C1 to cover the surface of MARISEAL® 270W with ceramic tiles, the final layer of the membrane must be fully saturated with oven-dry silica sand (size 0,4-0,8 mm). This saturation creates an adhesion bridge for the tile adhesive.

For tile adhesive type C2, saturating the surface with silica sand is optional.

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 slow down the curing process, while high temperatures accelerate it. High humidity may affect the final finish.

WARNING: MARISEAL® 270W is not suitable for UV exposure, so ensure it is always applied in a concealed manner, such as under ceramic tiles or similar coverings.

Safety measures

Keep away from children. Do not use 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 reflects 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 technical 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.

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