

# MARISEAL® 600

## Liquid-applied Polyurethane Waterproofing Membrane

TECHNICAL DATA SHEET  
Date: 11.01.2023 – Version 22

### Product Description

MARISEAL® 600 is a liquid-applied, highly permanent elastic, bitumen-Extended, polyurethane membrane used for long-lasting waterproofing. Solvent-based.

MARISEAL® 600 is based on pure elastomeric hydrophobic polyurethane resins, and is extended with chemically polymerized virgin bitumen, which result in excellent mechanical, chemical, thermal and natural element resistance properties.

Cures by reaction (cross linking) of the two components

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#### Product Information

- Two-component, solvent-based, cold applied and cold curing bitumen extended polyurethane

#### Packaging

- 1+1/5+5/20+20 lt metal pails

#### Color

- Black

#### 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

- Simple application
- When applied forms seamless membrane without joints.
- Resistant to stagnating water
- Resistant to frost
- Provides excellent crack-bridging properties
- Maintains its mechanical properties over a temperature span of
- -30°C to +90°C
- The waterproofed surface can be walked on
- Resistant to detergents, oils, seawater and domestic chemicals.
- Even if the membrane gets mechanically damaged, it can be easily repaired locally within minutes
- Does not need the use of open flames (torch) during application
- Components easy mixing ratio, 1:1 by volume

■ **Uses**

- Foundations
- Retaining Walls
- Roofs with inverted insulation
- Green roofs
- Asphalt- and Bitumen-felts, EDPM membranes, etc

■ **Consumption**

- 1,2 -2,0 l/m<sup>2</sup> in more than two layers  
This coverage is based on EN1504 for application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

■ **Certifications**



**EN1504-2: Surface protection for concrete. (1.0kg/m<sup>2</sup> MARISEAL®600)**

PROPERTY	PERFORMANCE
Permeability to CO <sub>2</sub>	sD > 50 m
Water vapour permeability	Class II: 5m < sD < 50 m
Capillary absorption and permeability to water	$\omega < 0,1 \text{ kg/m}^2 \cdot \text{h}^{0,5}$
Adhesion strength by pull-off test	$\geq 0,8 \text{ N/mm}^2$



**Compliant with ASTM C836 specification**



**EPD verified**




**Technical Data\***

PROPERTY	RESULTS	TEST METHOD
<b>Elongation at Break</b>	2400 %	ASTM D 412
<b>Tensile Strength</b>	> 1 N/ mm <sup>2</sup>	ASTM D 412
<b>E-Modulus</b>	-1,0 N/ mm <sup>2</sup>	ASTM D 412
<b>Tear Resistance</b>	20 N/ mm	ASTM D 624
<b>Puncture Resistance</b>	290 N	ASTM E 154
<b>Resistance to Hydrostatic pressure</b>	No Leak @ 3 bar (30 m water column)	DIN 16726
<b>Resistance to Root Penetration</b>	Resistant	CEN/TS 14416
<b>Adhesion to concrete</b>	1,2 N/mm <sup>2</sup>	EN 1542
<b>Permeability to CO<sub>2</sub></b>	0,73g/m <sup>2</sup> d	EN 1062-6
<b>Water vapour permeability</b>	4,32g/m <sup>2</sup> d	EN ISO 7783
<b>Capillary absorption and permeability to water</b>	0,012 kg/m <sup>2</sup> .h <sup>0.5</sup>	EN 1062-3
<b>Hardness (Shore A Scale)</b>	35	ASTM D 2240 (15")
<b>Thermal Resistance (80°C for 100 days)</b>	Passed - No significant changes	EOTA TR-011
<b>Hydrolysis (5% KOH, 7days cycle)</b>	No significant elastomeric change	Inhouse Lab
<b>Service Temperature</b>	-30°C to +90°C	Inhouse Lab
<b>Max. Temperature short time (15min shock)</b>	250°C	Inhouse Lab
<b>Pot-Life</b>	30 min	Conditions: 20°C, 50% RH
<b>Tack Free Time</b>	2-4 hours	Conditions: 20°C, 50% RH
<b>Light Pedestrian Traffic Time</b>	18-24 hours	Conditions: 20°C, 50% RH
<b>Final Curing time</b>	7 days	Conditions: 20°C, 50% RH
<b>Chemical Properties</b>	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

## 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 smoothed. Any loose surface pieces and grinding dust need to be thoroughly removed.

**WARNING: Do not wash surface with water!**

### Priming

On sound, high quality concrete surfaces no primer is necessary.

Prime very absorbent and brittle concrete or brittle cement screed surfaces with MARISEAL® 710 or with MARISEAL® AQUA PRIMER. Prime non-absorbent surfaces like metal, ceramic tiles and old coatings with MARISEAL® AQUA PRIMER. Allow the primer to cure according its technical instruction.

### Mixing

Stir MARISEAL® 600 Component A well before using an efficient electric mixer (min 300 RPM), for 2-3min. Equal quantities (by volume) of MARISEAL® 600 Component A and Component B should be mixed in a separate, clean container, by an efficient electric mixer (min 300 RPM), for about 4-5 min. Apply mixed quantities immediately

**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.

**WARNING:** If the mixed quantities exceed 20-30liters (e.g. 20lit+20lit), then the mixing of the Component A + Component B needs to be preformed for at least 5 min (!), following with the emptying of the mixture into a clean container and mixing again for 1-2min. This is important to ensure that the mixture will be fully homogeneous and no unmixed components are left present.

### **Waterproofing membrane**

Apply MARISEAL® 600 A+B mixture onto the surface by roller, brush or teeth trowel, until all surface is covered.

Reinforce always with the MARISEAL® Fabric at problem areas, like wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on still wet MARISEAL® 600 a correct cut piece of MARISEAL® Fabric, press it to soak, and saturate again with enough MARISEAL® 600. For detailed instructions with MARISEAL® Fabric, contact our technical department.

After 6-24 hours (not later than 36 hours) apply another layer of the MARISEAL®600. For demanding applications, apply a third layer of the MARISEAL®600.

If the MARISEAL® 600 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.

For best results, the temperature during application and cure should be between 10°C and 35°C. Low temperatures retard cure while high temperature speeds up curing. High humidity may affect the final finish.

**ATTENTION:** Please ensure consumption within the Pot Life.

**WARNING:** MARISEAL® 600 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 technical Dept. for more information

### **Protection/Thermoinsulation on Foundations/Retaining Walls**

Protect cured MARISEAL® 600, with a drainage board before backfilling. If an additional (optional) thermal insulation is required, stick an insulation board (XPS, EPS, PUR, PIR, etc.) on the cured MARISEAL® 600. Use MARIFLEX® PU40 as adhesive.

Protect with a suitable drainage membrane / board.

## **■ Safety measures**

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MARISEAL® 600 contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data Sheet. **PROFESSIONAL USE ONLY**

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 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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