

MARISEAL® 560

TECHNICAL DATA SHEET

Date: 01.06.2017 – Draft version1.01

Hand-applied Polyurea Waterproofing Membrane

Product description

MARISEAL® 560 is a premium, liquid-applied, highly permanent elastic, cold applied and cold curing, two components modified polyurea membrane used for long-lasting waterproofing.

The MARISEAL® 560 is based on pure elastomeric hydrophobic resins, which result in excellent mechanical, chemical, thermal and natural element resistance properties.

Cures by reaction of the two components.

Advantages

- Simple application (roller, trowel or airless spray).
- When applied forms seamless membrane without joints.
- Resistant to water.
- Resistant to frost.
- Crack-bridging.
- Provides water vapor permeability, so the surface can breathe.
- Provides excellent thermal resistance, it never turns soft.
- Maintains its mechanical properties over a temperature span of -30°C to +90°C.
- Provides excellent adhesion to almost any type of surface.
- The waterproofed surface can be used for domestic and public pedestrian traffic, depending on the choice of the top-coat.
- 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.
- Low cost

Uses

- Waterproofing of Roofs
- Waterproofing of Balconies, Terraces and Verandas
- Waterproofing of Wet Areas (under-tile) in Bathrooms, Kitchens, Balconies, Auxiliary Rooms, etc
- Waterproofing of Pedestrian traffic Decks in combination with the suitable top-coat.
- Waterproofing and protection of Concrete constructions.

Consumption

1,5 – 2,5 kg/m² applied in two layers.
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.

Colors

The MARISEAL® 560 is supplied in light grey.
Other colors may be supplied on demand.

Requires covering with suitable top-coat when applied in exposed surfaces and medium or heavy pedestrian use is required.

Technical Data *

PROPERTY	RESULTS	TEST METHOD
Chemical composition	Modified Polyurea Resin + Hardener	
Mixing Ratio	100 : 4 (preweighed pack 25kg : 1kg)	
Elongation at Break	> 500 %	ASTM D 412 / DIN 52455
Tensile Strength	> 4,5 N/ mm ²	ASTM D 412 / DIN 52455
Water Vapor Permeability	> 20 gr/m ² /day	ISO 9932:91
Resistance to Water Pressure	No Leak (1m water column, 24h)	DIN EN 1928
Adhesion to concrete	>2,0 N/mm ² (concrete surface failure)	ASTM D 903
Hardness (Shore A Scale)	65	ASTM D 2240 (15")
Thermal Resistance (80°C for 100 days)	Passed – No significant changes	EOTA TR-011
UV accelerated ageing, in the presence of moisture	Passed – Slight surface chalking	EOTA TR-010
Resistance after water aging	Passed	EOTA TR-012
Service Temperature	-30°C to +90°C	Inhouse Lab
Shock Temperature (20min)	200°C	Inhouse Lab
Pot life	30-35 min	Inhouse Lab
Rain Stability Time	2 hours	Conditions: 20°C, 50% RH
Light Pedestrian Traffic Time	6-8 hours	
Final Curing time	7 days	
Chemical Properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils.	

CONSTRUCTION



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 smoothened. 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 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® 560, 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® 560, 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® 560, 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® 560. 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 12-18 hours to cure.

Priming

Prime concrete, screed, metal and wooden surfaces with MARISEAL® 750 primer. Allow primer to cure.

Mixing

Stir MARISEAL 560 Component A well before using. Pour MARISEAL 560 Component B slowly into MARISEAL 560 Component A pail and mix by low speed mechanical stirrer, according to the stipulated mixing ratio, 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

Pour the MARISEAL® 560 mixture onto the primed surface and lay it out by roller or brush, until all surface is covered.

Backroll with spike roller, until encapsulated air can escape. Ensure that backrolling is done efficiently to remove all air bubbles.

After 6-8 hours (not later than 48 hours) apply another layer of the MARISEAL®560.

For demanding applications, apply a third layer of the MARISEAL®560.

ATTENTION: Please ensure consumption within the Pot Life of the product.

ATTENTION: Do not apply the MARISEAL® 560 over 1,5 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.

Finishing

If the MARISEAL 560 is applied on exposed surfaces, apply one or two layers of the color stable and totally UV stable MARISEAL® 400 Top-Coat over the MARISEAL® 560.

If a heavy duty, abrasion resistant surface is desired (e.g. Public Pedestrian Deck, etc), apply two layers of the MARISEAL® 420 Top-Coat. For the several Top-Coats application procedures, please consult their technical instructions.

WARNING: The MARISEAL® system 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® 560 A+B is supplied in 25+1 kg, and 6+0,18kg sets packed in metal 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°-30°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

Safety measures

MARISEAL® 560 contains isocyanates and amines. See information supplied by the manufacturer. Please study the Safety Data sheet. **PROFESSIONAL USE ONLY.**

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.

* All values represent typical values and are not part of the product specification. Upon UV exposure coating might yellow and fade on the surface.