

## MARISEAL® 281W

TECHNICAL DATA SHEET  
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### Liquid-applied Hybrid Polyurethane Waterproofing Membrane Water-Based

#### Product description

MARISEAL® 281W is a liquid-applied, highly permanent elastic, cold applied and cold curing, water based, hybrid polyurethane membrane, used for long-lasting waterproofing.

The MARISEAL® 281W is based on the innovative **PUD-Technology** of MARIS POLYMERS SMSA

#### Advantages

- Simple application (roller or airless spray)
- Forms a hydrophobic, waterproofing, permanent elastic, seamless membrane without joints or leak possibilities, that protects old and new structures efficiently and on a long-term basis
- UV resistant
- Suitable for exposed surfaces
- Resistant to stagnating water
- Maintains its mechanical properties over a temperature span of -20°C to +80°C
- Provides water vapor permeability
- Full surface adherence without any additional anchoring
- The waterproofed surface can be walked on (domestic use)
- Even if the membrane gets damaged, it can be easily repaired locally within minutes

#### PRODUCT INFORMATION

|                      |   |
|----------------------|---|
| <b>Chemical Base</b> | One-component, water-based aromatic hybrid polyurethane |
| <b>Packaging</b>     | 1/4/15/25 kg plastic pails                              |
| <b>Colour</b>        | White, Grey   |
| <b>Shelf Life</b>    | 18 months from date of production                       |

#### Main Uses

- Roofs
- Waterproofing and Protection of Concrete Constructions
- Waterproofing and Protection of Drywall and Cement-boards
- Protection of Polyurethane Foam Insulation

#### Consumption

1,0– 1,5 kg/m<sup>2</sup> in two or three 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. In case of entire area MARISEAL® FABRIC reinforcement, consumption increases.

#### PUD Technology™: The Sustainable Revolution in Polyurethane



MARISEAL® 281W is based on the innovative **PUD Technology™** of MARIS POLYMERS, which enables, long-chain polyurethane macromolecules to be incorporated in a water medium, forming stable dispersions.

The **PUD Technology™** based products, have the advantage offering the high-level properties of solvent based products, in an ecological, consumer and environmentally friendly, water-based, low VOC, non-ADR transport product.

The **PUD Technology™** is the entry to the Sustainable Revolution in Polyurethane-based products.





## Certifications

### EN1504-2: Surface protection for concrete. (1kg/m<sup>2</sup>)

#### Technical data\*

| PROPERTY   | RESULTS                                   | TEST METHOD              |
|--|---|--------------------------|
| Elongation at Break  | 100 %                                     | ASTM D 412               |
| Tensile Strength   | >1,5 N/ mm <sup>2</sup>                   | ASTM D 412               |
| Resistance to Water Pressure   | No Leak (1m water column, 24h)            | DIN EN 1928              |
| Adhesion to concrete   | >1,2 N/mm <sup>2</sup>                    | EN 1542                  |
| Permeability to CO <sub>2</sub> (measured in CE system)                | 3.4 g/m <sup>2</sup> d                    | EN 1062-6                |
| Water vapour permeability (measured in CE system)                      | 17.75 g/m <sup>2</sup> d                  | EN ISO 7783              |
| Capillary absorption and permeability to water (measured in CE system) | 0.009 kg/m <sup>2</sup> .h <sup>0.5</sup> | EN 1062-3                |
| Hardness (Shore A Scale)   | 60  | ASTM D 2240 (15")        |
| Tack Free Time   | 6 hours                                   | Conditions: 20°C, 50% RH |
| Light Pedestrian Traffic Time  | 18 hours                                  |                          |
| Final Curing time  | 7 days                                    |                          |

## 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%. 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.

### 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 joints of dust, residue or other contamination. Fill all prepared cracks and joints with MARIFLEX® PU 30 sealant. Then apply a layer of MARISEAL 281W®, 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 MARISEAL® FABRIC with enough MARISEAL 281W® until it is fully covered. Allow to cure.

### Priming

Prime absorbent surfaces with MARISEAL® 710W and non-absorbent surfaces with MARISEAL® AQUA PRIMER

Prime absorbent and brittle surfaces like concrete, cement screed, mortar, plaster, wood with MARISEAL® 281W diluted with 15-20% clean water used as primer.

### Waterproofing membrane

Stir well before using. Poor MARISEAL® 281W onto the prepared / primed surface and lay it out by roller or brush, until all surface is covered.

Stir well before using. Poor MARISEAL® 281W onto the prepared and primed surface and lay it out by roller, brush or squeegee, until all surface is covered. You can use airless spray allowing a considerable saving of manpower.

Reinforce always with MARISEAL® FABRIC at problem areas, like wall-floor connections, pipes, chimneys, waterspouts (siphon), light domes, etc. In order to do that, apply on the still wet MARISEAL® 281W a correct cut piece of MARISEAL® FABRIC, press it to soak, and saturate again with enough MARISEAL® 281W. For detailed application instructions with MARISEAL® FABRIC, contact our R+D department. We recommend reinforcement of the entire surface, with MARISEAL® FABRIC. Use 5-10cm stripe overlapping.

After 18-36 hours apply another layer of MARISEAL® 281W. For better waterproofing results apply a third layer of the MARISEAL 281W®.

**WARNING:** Do not apply MARISEAL® 281W in temperatures below 5°C or when dew, rain or frost is imminent in the next 48 hours. For best results, the temperature during application and cure should be between 5°C and 35°C. Low temperature retards cure while high temperature speeds up curing. High humidity (fog or dew conditions) retard cure and affect the curing times and curing properties. Do not apply the MARISEAL® 281W over 0.5 mm thickness (dry film) per layer.

**WARNING:** MARISEAL® 281W 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 information.

#### **Storage Conditions**

MARISEAL 281W pails should be stored in dry and cool rooms. Protect the material against 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 use empty containers for food storage. 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 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.

CONSTRUCTION

