MARITRANS® MD

Transparent, liquid-applied polyurethane waterproofing membrane

Product description
MARITRANS® MD is a transparent, hard-elastic, one component, aliphatic polyurethane, high-solids coating, used for long-lasting waterproofing. This high-technology coating is UV-stable, non-yellowing, weather stable, alkali and chemical resistant and even after aging it remains transparent and elastic. It waterproofs damaged glass surfaces and protects of glass fragments in case of breaking.

MARITRANS® MD is a low viscosity product ideal for use as a transparent top-coat over the MARISEAL® SYSTEM in decorative waterproofing applications. The MARITRANS: MD is used also as a transparent binder resin for sandcarpet floor coating applications, especially in exterior applications where flexibility and UV stability is required.

MARITRANS® MD is using a unique curing system (moisture triggered), and unlike other similar systems it does not react with moisture (moisture-cured) and does not form bubbles.

Uses
- Transparent waterproofing of Balconies and Terraces
- Transparent waterproofing of Ceramic surfaces
- Transparent waterproofing of Glass
- Transparent waterproofing of Glass-Brick walls
- Transparent waterproofing and protection of Natural Stones
- Transparent waterproofing of Transparent Plastics
  (e.g. Polycrylate, Polycarbonate)
- Transparent waterproofing and protection of Wood

Used also as a transparent top-coat over the MARISEAL® SYSTEM in decorative waterproofing applications. Also used as a transparent binder resin for sandcarpet exterior floor coating applications.

Technical Data *

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>RESULTS</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>Polyurethane high-solids pre-polymer</td>
<td></td>
</tr>
<tr>
<td>Elongation at Break</td>
<td>322%</td>
<td>DIN ISO 527</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>25.4 N/mm²</td>
<td>DIN ISO 527</td>
</tr>
<tr>
<td>Tear resistance</td>
<td>56.9 N/mm</td>
<td>DIN ISO 34, Method B</td>
</tr>
<tr>
<td>Elongation at break after 2000h of accelerated aging</td>
<td>298%</td>
<td>DIN ISO 527</td>
</tr>
<tr>
<td>(DIN EN ISO 4892-3, 400 MJ/m²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tensile strength after 2000h of accelerated aging</td>
<td>25.5 N/mm²</td>
<td>DIN ISO 527</td>
</tr>
<tr>
<td>(DIN EN ISO 4892-3, 400 MJ/m²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gloss retention after 2000h of accelerated aging</td>
<td>Good</td>
<td>DIN 67530</td>
</tr>
<tr>
<td>(DIN EN ISO 4892-3, 400 MJ/m²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface chalking after 2000h of accelerated aging</td>
<td>No chalking observed. Chalking grade 0</td>
<td>DIN EN ISO 4628-6</td>
</tr>
<tr>
<td>(DIN EN ISO 4892-3, 400 MJ/m²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardness (SHORE D Scale)</td>
<td>25</td>
<td>ASTM D 2240</td>
</tr>
<tr>
<td>Water vapor permeability</td>
<td>8.05 gr/m² 24hours</td>
<td>EN ISO 12572</td>
</tr>
<tr>
<td>Resistance to Water Pressure</td>
<td>No Leak (1m water column, 24h)</td>
<td>DIN EN 1928</td>
</tr>
<tr>
<td>Adhesion to absorbent ceramic tile</td>
<td>&gt;2.0 N/mm² (ceramic tile failure)</td>
<td>ASTM D 903 (ELCOMETER)</td>
</tr>
<tr>
<td>Hydrolysis (5% KOH, 7days cycle)</td>
<td>No significant elastomeric change</td>
<td>Inhouse Lab</td>
</tr>
<tr>
<td>Service Temperature</td>
<td>-40°C to +90°C</td>
<td>Inhouse Lab</td>
</tr>
<tr>
<td>Tack Free Time</td>
<td>8 hours</td>
<td>Conditions: 20°C, 50% RH</td>
</tr>
<tr>
<td>Light Pedestrian Traffic Time</td>
<td>24 hours</td>
<td></td>
</tr>
<tr>
<td>Final Curing time</td>
<td>7 days</td>
<td></td>
</tr>
<tr>
<td>Chemical Properties</td>
<td>Good resistance against detergents, seawater and oils.</td>
<td></td>
</tr>
</tbody>
</table>

Consumption
0.3 – 1 kg/m² in one to three layers, depending on application. 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 MARITRANS® MD coating is supplied transparent.
Application as Transparent Waterproofing Membrane

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%. New concrete structures need to dry for at least 28 days. Old coatings, dirt, fats, oils, organic substances and dust need to be removed. Activate (prime) and degrease glass and glazed surfaces with the MARISEAL® TILE-PRIMER. Possible surface irregularities need to be smoothened. Any loose pieces and dust need to be thoroughly removed. Do not wash surface with water!

ATTENTION: Surfaces with trapped moisture (e.g. trapped moisture under balconies tiles) must be left to dry completely (max. 5% moisture), before the application of the MARITRANS® MD coating.

WARNING: Do not apply the MARITRANS® MD on ceramic surfaces with ascending nitric salts in the joints, without suitable pretreatment. Do not apply the MARITRANS® MD on surfaces treated in the past with active silane, siloxane, silicon or other water-repellents, because of expected poor adhesion. We recommend an adhesion test, if circumstances and surface history are not clear.

On marble and granite please perform an adhesion test, to ensure that adhesion is proper.

 repairing 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, expansion joints and control joints of dust, residue or other contamination. Prime locally with MARITRANS® MD Primer (activate) and degrease. Change cloths often. Make sure that enough quantity of MARITRANS® MD TILE-PRIMER is applied on the entire surface to primed and make sure that you do not leave any untreated spots.

Priming (Activation of surface)
Prime (activate) non-absorbent glazed surfaces, like glazed ceramic tiles, glass and glass bricks with MARITRANS® TILE-PRIMER. Apply the MARITRANS® TILE-PRIMER by soaking a clean and dry cloth, and wipe the entire surface off. By this application procedure, you ensure that besides the chemical activation (priming) of the surface, the surface is getting also very effectively degreased. Change cloths often. Make sure that enough quantity of MARITRANS® MD TILE-PRIMER is applied on the entire surface to primed and make sure that you do not leave any untreated spots.

Transparent waterproofing membrane
Pour the MARITRANS® MD coating onto the primed surface and lay it out by roller or by suitable teeth trowel, until all surface is covered at a consumption per layer of 0,3-0,5kg/m2. After 12 hours - but not later than 18 hours – apply a second layer of the MARITRANS® MD coating, by using roller or brush.

For better waterproofing and wear resistance results, apply a third layer of the MARITRANS® MD coating.

ATTENTION: Do not apply the MARITRANS® MD over 1mm 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 a satin matte surface is desired, apply one layer of the MARITRANS® FINISH.

Application as Transparent Top Coat in Decorative Waterproofing Applications

Surface Preparation
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%. Any loose pieces and dust need to be removed. Do not wash surface with water!

Transparent Top-Coating
Apply the MARITRANS® MD coating onto the finished, decorative designed MARISEAL® SYSTEM surface by roller at a consumption of 0,2-0,3 kg/m2. In colored sand finished decorative applications a second coat after 6-18 hours is recommended.

WARNING: The MARITRANS® MD coating 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.

Application as a Binder Resin for Sandcarpet Coating

Surface Preparation
Careful surface preparation is essential for optimum finish and durability. If applied on MARISEAL 250 make sure that the surface is clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the sandcarpet coating. Maximum moisture content should not exceed 5%. Any loose pieces and dust need to be thoroughly removed. Do not wash surface with water!

If applied onto concrete, make sure that the surface is clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. New concrete structures need to dry for at least 28 days. Old coatings, dirt, fats, oils, organic substances and dust need to be removed. Possible surface irregularities need to be smoothened. Any loose pieces and dust need to be thoroughly removed. Do not wash surface with water!

Priming
Prime concrete surfaces with MARISEAL 750 primer and broadcast silica sand while still wet.
**Sandcarpet Coating**

Mix the MARITRANS® MD with colored Silica Sand (cornsize 0.7-1.2mm or 2.0-3.5mm) in a mixing ratio of 1:10 (resin: sand) by weight, with a low speed mechanical mixer, until the mixture becomes fully homogenous.

Pour the mixture onto the prepared surface and apply by flat trowel.

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.

**Packaging**

MARITRANS® MD is supplied in 20 kg, 10 kg, 5 kg and 1kg 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°C-30°C. Products should remain in their original, unopened containers, bearing the manufacturers name, product designation, batch number and application precaution labels.

**Safety measures**

MARITRANS® MD contains isocyanates. See information supplied by the manufacturer. Please study the Safety Data sheet.

PROFESSIONAL USE ONLY.

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