Product Description

Matacryl® Manual LM is a medium viscosity, urethane-modified, pre-reacted 100 % solid membrane system based on acrylic monomers. It is part of an innovative waterproofing system that supports tight completion timelines of infrastructure projects and ensures long-term performance and resilience.

Basic Uses

Matacryl Manual LM is an easy to apply, low modulus, highly elastomeric liquid waterproofing membrane and coating. It can be applied at a range of ambient and substrate temperatures -4 to 95 °F (-20 to 35 °C) onto cementitious based screeds, concrete, filled bitumen/asphalt, metal, ceramic tile and wood substrates. Can also be used as joint filler for joints with low dynamic movement. Waterproofing applications include:

- Bridge deck onto which rolled asphalt at temperatures up to 382 °F (194 °C) can be directly applied.
- Sub grade of civil engineering structures including underground slabs.
- Concrete and metal railway bridges, including directly under track ballast.
- Pedestrian and vehicular bridges and walkways.
- Tunnels, channels, dam structures and offshore platforms.
- Containment structures including reservoirs, and waste and contaminated material storage.

Features and Benefits

Matacryl Manual LM is a highly-flexible crack bridging membrane with excellent performance characteristics, even in extremely low temperatures: -22 °F (-30 °C).

- Fully cured one hour after application. Rapid cure time allows for quick installation, regardless of temperature, letting projects continue in colder months.
- Adheres to many types of substrates.
- Unique chemistry promotes interlayer adhesion, allowing for easy repairs.
- Easy to apply using a roller or squeegee.
- No time limit or additional preparation for subsequent membrane applications.
- Excellent chemical, abrasion, impact and puncture resistance.
- Withstands movement and stress in the substrate.
- For vertical surfaces, a thixotropic additive may be used.

Physical Properties*

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC Content</td>
<td>Definition</td>
<td>0.0 g/l</td>
</tr>
<tr>
<td>Viscosity @ 77 °F (25 °C)</td>
<td>DIN 53019</td>
<td>300-550 mPa*s</td>
</tr>
<tr>
<td>Density @ 77 °F (25 °C)</td>
<td>ISO 2811</td>
<td>1.23 g/ml</td>
</tr>
<tr>
<td>Curing Time @ 68 °F (20 °C)</td>
<td></td>
<td>approx. 60 minutes</td>
</tr>
<tr>
<td>Elongation @ 75 °F (24 °C)</td>
<td>DIN EN ISO 527</td>
<td>&gt; 400 %</td>
</tr>
<tr>
<td>Tensile Strength @ 75 °F (24 °C)</td>
<td>DIN EN ISO 527</td>
<td>&gt; 8.0 MPa</td>
</tr>
<tr>
<td>Shore A Hardness</td>
<td>DIN EN ISO 868</td>
<td>71</td>
</tr>
<tr>
<td>Shore D Hardness</td>
<td>DIN EN ISO 868</td>
<td>18</td>
</tr>
<tr>
<td>Dynamic Crack Bridging @ -13 °F (-26 °C)</td>
<td>NF EN 1062-7</td>
<td>≥ 3.2 mm</td>
</tr>
</tbody>
</table>

*Please note that an objective comparison with other data is only possible if test methods and parameters are identical.

Packaging

- 2 US gal/pail
- 6 US gal/pail
Installation

Surface Preparation
- Prior to applying Matacryl Manual LM, a suitable Matacryl Primer, including sanding when appropriate, must be applied.
- To prime, substrates must be dry, firm, solid and free of dust, grease, oil, and loose particles, usually by shot or sand blasting to attain correct surface profile. Newly poured concrete must have reached adequate strength to receive Matacryl system.

Mixing
- Prior to use, Matacryl Manual LM must be carefully stirred to achieve uniform distribution of the paraffin in the product, normally a minimum of three (3) minutes.
- Matacryl Manual LM is thoroughly mixed together with Matacryl Reactive Filler (25 % dibenzoyl peroxide) or Matacryl Catalyst (50 % dibenzoyl peroxide), in accordance with the following guidelines. The amount of initiator powder to be added depends on the substrate temperature.

<table>
<thead>
<tr>
<th>Temp F</th>
<th>Temp C</th>
<th>Matacryl Reactive Filler</th>
<th>Matacryl Catalyst</th>
<th>Matacryl Accelerator</th>
</tr>
</thead>
<tbody>
<tr>
<td>86 °F</td>
<td>30 °C</td>
<td>2 % by weight of resin</td>
<td>1 % by weight of resin</td>
<td>n/a</td>
</tr>
<tr>
<td>68 °F</td>
<td>20 °C</td>
<td>4 % by weight of resin</td>
<td>2 % by weight of resin</td>
<td>n/a</td>
</tr>
<tr>
<td>50 °F</td>
<td>10 °C</td>
<td>8 % by weight of resin</td>
<td>4 % by weight of resin</td>
<td>n/a</td>
</tr>
<tr>
<td>32 °F</td>
<td>0 °C</td>
<td>10 % by weight of resin</td>
<td>5 % by weight of resin</td>
<td>n/a</td>
</tr>
<tr>
<td>&lt;32 °F</td>
<td>&lt;0 °C</td>
<td>12 % by weight of resin</td>
<td>6 % by weight of resin</td>
<td>1-3 % by weight of resin</td>
</tr>
</tbody>
</table>

Note: For safety reasons, Matacryl Accelerator must be added to reactive resin PRIOR to adding any initiator. See TDS Matacryl Accelerator for more details.

Application
Matacryl Manual LM is manually applied using a roller or squeegee. For the consumption of product per m², please consult the System Build Up Sheets. Per layer of membrane, a minimum thickness of 1 mm (= 1.23 kg/m²) should always be applied. If extending an existing Matacryl application, the new membrane should overlap by a minimum of 50 mm.
- Do not apply when surface temperature is above 104 °F (40 °C) and/or rapidly rising. Special care must be observed if area is exposed to direct sunlight.
- Substrate temperature must be at least 3° over actual dew point and rising.

The techniques involved may require modification to adjust to job-site specific conditions. Consult your Tremco Infrastructure Sales Representative or Tremco Technical Services for site conditions and requirements. For further installation details, see our General Preparation and Application Guidelines for “Matacryl Systems”.

Limitations/ Shelf Life
One (1) year when stored in a dry place in original, closed packaging. Optimal storage temperature: 60 to 70 °F (15 to 20 °C)

Warranty
Tremco warrants its Products to be free of defects in materials but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Tremco makes no other warranty, expressed or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE with respect to Tremco Products. Tremco’s sole obligation shall be, at its option, to replace or to refund the purchase price of the quantity of Tremco Products proven to be defective, and Tremco shall not be liable for any loss or damage.

Please refer to our website at www.tremcoinfrastructure.com for the most up-to-date Product Data Sheets.

NOTE: All Tremco Safety Data Sheets (SDS) are in alignment with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) requirements.