MasterSeal® M 811

Two-component polyurea hybrid, pigmented, elastic, highly reactive, spray applied (machine application) waterproofing membrane with short curing time

DESCRIPTION
MasterSeal M 811 is a solvent free, two-component polyurea hybrid waterproofing membrane. It is high reactive and needs to be applied by special, two component spray equipment (Mixing ratio 100 : 100 by volume).

TYPICAL APPLICATIONS
MasterSeal M 811 is used in a wide range of waterproofing applications such as car park decks, podium decks, cut and cover tunneling, roofing and basement waterproofing. It is also used in some secondary containment applications.

Using the appropriate primer, MasterSeal M 811 can be applied to most substrates including concrete, steel, bitumen cement screed, glass reinforced polyester, timber etc.

ADVANTAGES
- fast reacting
- high build capability
- application to vertical surface without runs
- easy application to complicated details
- fast installation
- monolithic – no laps, welds or seams
- fully bonded
- high water vapor permeability – low risk of blistering
- excellent mechanical properties
- excellent crack bridging
- resistant to puncture
- resistant to standing water
- thermoset – does not soften at elevated temperatures
- remains elastic at low temperatures; Tg approx. -45°C
- solvent free

MasterSeal M 811 features high elasticity, excellent tensile strength and elongation and a good wear resistance. This highly reactive waterproofing membrane allows its installation on vertical surfaces without problem. Moreover, this fast-curing membrane can be re-coated within a few hours.

PACKAGING AND COLORS
MasterSeal M 811 is available as:

Option 1
- PTA 200 kg
- PTB 200 kg

Option 2
- PTA 210 kg
- PTB 220 kg

MasterSeal M 811 is available in the following color combination:
- PTA grey / PTB unpigmented

APPLICATION GUIDELINES
(a) Surface Preparation:

The preparation of the substrate and the use of the appropriate primer are of paramount importance. All surfaces to which MasterSeal M 811 is applied should be sound, clean and dry and free from oil or grease, loose particles and any other substances which may impair adhesion. For substrate pre-treatment prior to the primer application see primer technical data sheet.

Concrete and cementitious screed
Concrete and other cementitious substrates must have a minimum pull off strength of 1.5 N/mm². Any laitance present on the surface must be removed mechanically. Shot blasting is the preferred method. Release oil and other contaminants which may impair adhesion must be removed prior to the application of the primer.
**MasterSeal® M 811**

**Asphalt (only indoor)**  
The asphalt should be cleaned by high pressure water jetting. In mechanically stressed applications the load bearing capacity of the asphalt should be suitable for the intended use and should be shot blasted so that at least 60% of the surface aggregate is exposed. Blisters should be warmed, re-dressed and a de-bond tape applied over.

**Bituminous sheeting**  
*MasterSeal M 811* can be applied on bituminous sheeting if no fire-protection is required. For further details, please consult your local sales office.

**Iron / steel**  
Should be sand blasted to an Sa 2½ finish prior to application of the primer.

**Primer**

<table>
<thead>
<tr>
<th>Substrate</th>
<th>Primer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete cementitious / screed</td>
<td>MasterTop P 650</td>
</tr>
<tr>
<td>Aged MasterSeal membranes</td>
<td>MasterSeal P 691</td>
</tr>
</tbody>
</table>

In some circumstances, other primers may be more appropriate. For further details, please consult your local sales office.

**(b) Mixing**  
**(c) Placing / Application**  
*MasterSeal M 811* can only be applied by means of a suitable two component spray machine (high pressure with reverse flow technology) (e.g. Graco Reactor 2 E-XP2). The choice of machine depends to a large extent on the type and size of work contemplated. For advice, please contact BASF Construction Chemicals.

*MasterSeal M 811* should only be applied to properly prepared substrates.

*MasterSeal M 811* is available with the PTA colored grey (stir well before use) and the PTB colorless. This results in a uniform grey color of the sprayed material thus giving the sprayer a visual control of the quality of the mixing as machine faults become immediately obvious. This can reduce costly clean up time and material wastage.

Due to the fast reaction it is possible to rapidly build thicknesses from 1.0 to > 6mm. Surrounding areas should be protected from overspray by masking off with e.g. polyethylene sheet or paper. Care should be taken to prevent spray mist being carried by wind by erecting suitable barriers. *MasterSeal M 811* should be applied within the recommended temperature and relative humidity limits. The temperature of the substrate must be at least 3K above the dew point during the application.

**CLEANING**  
Re-useable tools should be cleaned carefully with a suitable thinner (Xylene / MEK / Acetone).

**COVERAGE / YIELD**  
Minimum 1.5 kg/m² to achieve 1.5 mm thickness for podium and roof waterproofing. The above coverage does not include wastage and may vary depending on the profile of the substrate.

For coverages on different applications, consult BASF Technical Services Department.

**TOP COATS**  
*MasterSeal M 811* does not have sufficient UV and weather resistance to be used in exposed applications without protection.

In exposed areas a UV resistant topcoat is required i.e. *MasterSeal TC 258*, consult your local Technical Services office for further details.
# MasterSeal® M 811

## TECHNICAL DATA*

<table>
<thead>
<tr>
<th>Properties</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical base</td>
<td>Polyurea hybrid</td>
</tr>
<tr>
<td>Mixing ratio</td>
<td>100 : 100 by volume</td>
</tr>
<tr>
<td></td>
<td>100 : 106 by weight</td>
</tr>
<tr>
<td>Density @ 23°C</td>
<td>PTA: 1.06 kg/L</td>
</tr>
<tr>
<td></td>
<td>PTB: 1.08 kg/L</td>
</tr>
<tr>
<td>Viscosity @ 23°C</td>
<td>PTA: 1725 mPas</td>
</tr>
<tr>
<td></td>
<td>PTB: 1800 mPas</td>
</tr>
<tr>
<td>Reaction time (sprayed)</td>
<td>10-15 s</td>
</tr>
<tr>
<td>Fully cured @ 23°C</td>
<td>2 d</td>
</tr>
<tr>
<td>Processing temperature (Flow heater, Hose heater)</td>
<td>PTA: 70-75°C</td>
</tr>
<tr>
<td></td>
<td>PTB: 70-75°C</td>
</tr>
<tr>
<td>Processing pressure</td>
<td>PTA: 130-180 bar</td>
</tr>
<tr>
<td></td>
<td>PTB: 130-180 bar</td>
</tr>
<tr>
<td>Substrate and ambient temperatures</td>
<td>min. 5°C to max. 35°C</td>
</tr>
<tr>
<td>Permissible relative humidity</td>
<td>max. 85%</td>
</tr>
</tbody>
</table>

## Technical data after curing*

<table>
<thead>
<tr>
<th>Properties</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shore A Hardness ASTM D2240</td>
<td>87</td>
</tr>
<tr>
<td>Tensile strength ASTM D412 : 2013</td>
<td>14 N/mm²</td>
</tr>
<tr>
<td>Elongation ASTM D412 : 2013</td>
<td>&gt; 500%</td>
</tr>
<tr>
<td>Tear strength ASTM D624 : 2000e</td>
<td>50 kN/m</td>
</tr>
</tbody>
</table>

*The above figures are intended as a guide only and should not be used as a basis for specifications.
MASTERSEAL® M 811

WATCHPOINTS
This product conforms to the EU directive 2004/42/EG (Deco-Paint directive) and contains less than the maximum allowable VOC limit (Stage 2, 2010). According to the EU directive 2004/42, the maximum allowable VOC content for the Product Category IIA / j is 500g/l (Limit: Stage 2, 2010). The VOC content for MASTERSEAL M 811 is <10g/l (for the ready to use product).

HEALTH AND SAFETY
In its cured state, MASTERSEAL M 811 is physiologically non-hazardous. The following protective measures should be taken when working with this material:
- Wear safety gloves, goggles and protective clothing. Avoid contact with the skin and eyes. In case of eye contact, seek medical attention.
- Avoid inhalation of the fumes. Respiratory protection must be worn when spraying or when in the vicinity of the spraying operation.

When working in well ventilated areas, a combined char-coal filter and particle filter mask (A-P2) should be worn. When working in less well ventilated and in confined spaces, air-fed helmets are to be worn by sprayer and assistant(s). When working with the product do not eat, smoke or work near a naked flame. For additional references to safety-hazard warnings, regulations regarding transport and waste management please refer to the relevant Material Safety Data Sheet. The regulations of the local trade association and/or other authorities, regulating safety and hygiene of workers handling polyurethane and isocyanates must be followed.

STORAGE AND SHELF LIFE
Store in original containers, under dry conditions and a temperature between 15-25°C. Do not expose to direct sunlight. For maximum shelf life under these conditions, see "Best before...." label.

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® = Registered trademark of the BASF-Group in many countries.
* Properties listed are based on laboratory controlled tests.