

## PRODUCT DATA SHEET

# Sikalastic® M 800 R

(formerly MSeal M 800)

Two component, hot spray, fast setting hybrid polyurethane polyurea waterproofing membrane

### DESCRIPTION

Sikalastic® M 800 R is a solvent free, two component, pigmented, low modulus, hybrid polyurethane polyurea waterproofing membrane. It is highly reactive and can only be applied by special two component spray equipment.

Sikalastic® M 800 R has been in use since 1985 and forms the basis of a number of approval certificates for various waterproofing applications worldwide.

### USES

Sikalastic® M 800 R may only be used by experienced professionals.

Sikalastic® M 800 R is used in wide range of waterproofing applications such as: Roofing, balcony, terrace, podium decks, car park decks, bridge deck waterproofing, cut and cover tunneling and basement waterproofing.

Using the appropriate primer, Sikalastic® M 800 R can be applied to most substrates including concrete, bitumen cement screed, glass reinforced polyester, timber etc.

### CHARACTERISTICS / ADVANTAGES

- Long Track Record (since 1985)
- Fast reacting spray application – Complex details both horizontal and vertical easy to waterproof
- Application to vertical surface without runs - Installation to walls not problem
- Monolithic – No laps, welds or seams
- Fully bonded – Moves with the structure
- High water vapor permeability – Low risk of blistering in service
- Crack bridging capability- Can cope with cracks that occur after installation
- Solvent and monomeric isocyanate free – Increased

safety for applicators

- Unaffected by standing water or ground water – Suitable for constant water contact
- Thermoset – Does not soften at elevated temperatures encountered on a roof
- Withstands the high temperature – Suitable for bridge deck waterproofing during laying of hot poured asphalt (approx..240°C)
- Remains elastic at low temperatures-Tg approx. -45°C – Suitable for all Asia Pacific.
- Solvent free

### SUSTAINABILITY

Conformity with LEED credits (latest version LEED V4, revised 2012): Low-Emitting Materials - Paints and Coatings

### APPROVALS / STANDARDS

- Singapore Green Label
- Meet Japan JIS A 6021 Type I
- ASTM C 836 Crack bridge 10 cycles at 3.2mm at -20 degree
- BBA Car Park Deck System Certification 16/5358
- Japan NEXCO II certification for bridge deck waterproofing
- ETA Bridge deck certification ETA 22/0358, issued based on EAD 030675-00-0107
- Root Resistant DIN 4062

## PRODUCT INFORMATION

<b>Chemical base</b>	Hybrid Polyurethane/Polyurea	
<b>Packaging</b>	Part A: 200 kg/drum Part B: 220 kg/drum	
<b>Shelf life</b>	Part A & Part B: 12 months from date of production	
<b>Storage conditions</b>	The product must be stored properly in original, unopened and undamaged sealed packaging in dry conditions. Part A & Part B store at temperatures between +10 °C and +30 °C.  Higher storage temperatures may reduce shelf life of product.  Reference shall also be made to the storage recommendations within the safety data sheet.	
<b>Appearance / Colour</b>	Part A: Grey Liquid Part B: Light Yellow Clear Liquid	
<b>Density</b>	Part A: 1.05 ± 0.03 kg/L @25°C Part B: 1.10 ± 0.05 kg/L @25°C	(Internal) (Internal)
<b>Viscosity</b>	Part A: 1650 mPas @ 25°C Part B: 1000 mPas @ 25°C	(Internal) (Internal)
<b>Volatile organic compound (VOC) content</b>	1.0 g/L	ISO 11890-2:2020

## TECHNICAL INFORMATION

<b>Shore A Hardness</b>	min 65	(ASTM D 2240)
<b>Resistance to Root Penetration</b>	Pass	(DIN 4062)
<b>Tensile Strength</b>	min 8 MPa	(ASTM D 412)
<b>Elongation at Break</b>	min 400%	(ASTM D 412)
<b>Crack Bridging Ability</b>	Static crack bridge: 2mm at 25°C (ASTM C 836) Dynamic crack bridge: No crack (at 3.2mm/hr rate, 10 cycle), oven at 70±2°C for 7 days, kept at -26°C for 24 hrs (ASTM C1305-2016) Dynamic crack bridge: 1mm 10 cycles at 25°C (ASTM C 836) Dynamic crack bridge: Pass at -30°C with a sinusoidal wave of maximum crack amplitude of 0.32 at 1HZ during 10,000 cycles (EN14224)	
<b>Tensile Adhesion Strength</b>	min 1.5 N/mm <sup>2</sup> at 14 days	(ASTM D7234-21)
<b>Tear Strength</b>	min 30N/mm	(ASTM D624)
<b>Thermal Resistance</b>	No crack at -30°C (EN 14224-2010) Sikalastic® M 800 R is short term resistant to mastic asphalt (hot poured asphalt) applied at roughly + 240°C. (Per ETA 22/0358 report)	
<b>Water Penetration under Pressure</b>	No leakage at 5 bar	(DIN 16726)

## SYSTEM INFORMATION

<b>Systems</b>	<b>Exposed Roof Waterproofing</b> Sikalastic® M 800 R is applied in one coat or two coat of UV protection layers as below.
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Layer Product Consumption

Layer	Product	Consumption
1. Primer	Sikafloor®-161 HC or Sikafloor® PW-F broadcasted with quartz sand 0.3~0.8 mm	Refer to individual Product Data Sheet
2. Waterproofing	Sikalastic® M 800 R	≥ 1.8 kg/m <sup>2</sup>
3. UV Protection	Sikalastic®-Excel Top or Sikalastic®-701 or Sikalastic® TC 259 or Sikalastic® U-Coating	0.2 kg/m <sup>2</sup> 0.3 kg/m <sup>2</sup> 0.2 kg/m <sup>2</sup> 0.3 kg/m <sup>2</sup>

**Non-Exposed Roof Waterproofing**

Sikalastic® M 800 R is applied in one or two coats  
layer Product Consumption

Layer	Product	Consumption
1. Primer	Sikafloor®-161 HC or Sikafloor® PW-F	Refer to individual Product Data Sheet
2. Waterproofing	Sikalastic® M 800 R	≥ 2.1 kg/m <sup>2</sup>

Note: These figures are theoretical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastage.

**Dry film thickness**

<b>Exposed roofing</b>	
Waterproofing layer	~1.6 mm
UV protection layer	~0.2 mm
Total	~1.8 mm
<b>Non-Exposed roofing</b>	
Waterproofing layer	~ 2.0 mm

**APPLICATION INFORMATION**

<b>Mixing ratio</b>	Part A : Part B = 100 : 73 (by weight) Part A : Part B = 100 : 70 (by volume)
<b>Product Temperature</b>	Flow Heater, hose heater* Part A 70 ~ 75°C Part B 65 ~ 70°C  Processing pressure, bar Part A 130 ~ 180 Part B 130 ~ 180  * The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions.
<b>Ambient Air Temperature</b>	+8 °C min. / +50 °C max.
<b>Relative Air Humidity</b>	85 % r.h. max
<b>Substrate Moisture Content</b>	≤ 4 % pbw moisture content. Test method: Sika®-Tramex meter, CM - measurement on Oven-dry method No rising moisture according to ASTM (Polyethylene-sheet).
<b>Gel time</b>	15 ± 3 s (Internal)
<b>Waiting Time / Overcoating</b>	Before applying Sikalastic® M 800 R on Sikafloor®-161 HC or Sikafloor® PW-F allow*

<b>Substrate temperature</b>	<b>Minimum waiting time</b>	<b>Maximum waiting time</b>
+10°C	24 hours	4 days
+20°C	12 hours	2 days
+30°C	8 hours	24 hours

Before applying Sikalastic® M 800 R on Sikalastic® M 800 R allow\*:

<b>Substrate temperature</b>	<b>Minimum waiting time</b>	<b>Maximum waiting time</b>
+10°C	Immediately	8 hours
+20°C	Immediately	4 hours
+30°C	Immediately	2 hours

Before applying Sikalastic®-701 or Sikalastic® Excel Top or Sikalastic® TC 259 or Sikalastic® U-Coating on Sikalastic® M 800 R allow:

<b>Substrate temperature</b>	<b>Minimum waiting time</b>	<b>Maximum waiting time</b>
+10°C	30 mins	24 hours
+20°C	20 mins	16 hours
+30°C	10 mins	12 hours

\*If re-coating times are exceeded or rain falls or dew occurs on the surface of Sikalastic® M 800 R then the membrane must be dried and Sikalastic® P 691 or SikaSokan Primer J should be applied at consumption of 80 ~ 100 g/m<sup>2</sup> prior to the application of membrane or Topcoat.

Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## IMPORTANT CONSIDERATION

- Application is by 2-part hot spray equipment only. For spray application the use of protective health and safety equipment is mandatory.
- Always refer to the manufacturer's instructions before use the tools and mixing equipment.
- Products shall only be applied in accordance with their intended use.
- Do not apply Sikalastic® M 800 R on substrates with rising moisture.
- On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperatures. If applied during rising temperatures "pin holing" may occur from rising air.
- Product shall be used in conjunction with a safe system of work. Ensure an adequate assessment of all site risks has been conducted prior to work commencing. Refer to the product safety datasheet for further guidance.
- Do not use Sikalastic® M 800 R for indoor applications.
- Sikalastic® M 800 R is not UV light resistant and changes colour under UV exposure. However, the performance and technical properties are not affected providing the exposure is max. 4 weeks. It is therefore advisable to overcoat Sikalastic® M 800 R with UV-protective top coat as early as possible.
- In wet areas or climatic zones with a permanent air humidity of more than 80 %, in combination with a permanent air temperature of more than +30 °C, Sika® Concrete Primer or Sikalastic® P 691 must be used as

adhesion promoter.

- Please note: Always apply a test area first.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

The surface must be sound, clean, dry, and free from oil and climes grease, loose particles and other contaminants which may impair adhesion

Depending on the material the substrate must be primed or mechanically cleaned. Grinding may be necessary to level the surface. Suitable substrates are such as: Concrete, bituminous felts and coatings, metal, brickwork, asbestos cement, ceramic tiles.

#### Concrete and Cementitious Scream:

The concrete substrates to be sprayed must be at least 14 days old, dry, free of laitance as well as substances which impair adhesion such as oil, grease, rubber skid marks, paint, or other contaminants. Preparation of the substrate by grit or shot blasting, high-pressure water jetting, grinding, or scarifying is necessary for plain concrete. Prior to application of the primer the bond strength of the substrate must be at least 1.5 MPa. To enhance bond strength, we recommend broadcasting 0.3 to 0.8 mm of quartz sand over the primer.

The substrate to be coated must be protected against rising damp by having a damp proof membrane in-

stalled if it is a slab in contact with the ground.

#### **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 de-bond tape applied over.

#### **Bituminous Sheeting**

Sikalastic® M 800 R can be applied on bituminous sheeting by using special primers. For further details, please consult your local sales office.

#### **Iron / Steel**

Iron or steel surfaces should be sand blasted to an SA 2 ½ finish prior to the application of primer.

#### **MIXING**

Dose and mix with suitable two-component spray equipment. Maintain recommended product and hose temperature.

#### **Recommended pressure:**

Part A + B 130–180 bar.

Ensure equal pressure of Part A + B. The accuracy of pressure, mixing and dosage must be controlled regularly with the equipment.

#### **APPLICATION**

Sikalastic® M 800 R is available with the Part A in Grey colors (stir well before use) and the Part B Colorless. When sprayed results in a uniform grey colour which gives 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 > 6 mm. Surrounding areas should be protected from over-spray 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. The temperature of the substrate should be min. 3°C above the dew point prior to application of the membrane.

Primer has to be cured to a 'tack-free' state prior to the application of Sikalastic® M 800 R.

Damageable areas (handrails etc.) have to be protected with tape or plastic wrapping.

#### **Waterproofing:**

Spray apply Sikalastic® M 800 R with suitable two-component hot spray equipment. Possible suppliers of spray equipment are Gama, Graco, Isotherm, WiWa, Reaku etc.

#### **UV Protection:**

One layer of Sikalastic®-701 or Sikalastic® Excel Top or

2 layers of Sikalastic® TC 259 applied either by roller or airless spray.

For more detailed application engineering information pls. refer to the appropriate method statement.

#### **CLEANING**

Clean all tools and application equipment with Thinner C immediately after use. Hardened and/or cured material can only be removed mechanically.

#### **LOCAL RESTRICTIONS**

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

#### **LEGAL NOTES**

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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#### **Product Data Sheet**

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