

PRODUCT DATA SHEET

Sikalastic® M 686

(formerly MSeal M 686)

Two component polyurea waterproofing membrane, highly elastic, rapid curing, for manual applications

PRODUCT DESCRIPTION

Sikalastic® M 686 is a rapid curing two component, hand applied, slightly thixotropic, elastomeric polyurea membrane with high chemical and mechanical resistance.

USES

Sikalastic® M 686 is used in a variety of concrete water-proofing applications including containments, waste water plants, roofing, balconies etc.

CHARACTERISTICS / ADVANTAGES

- Monolithic – no laps, welds or seams
- Fully bonded
- Excellent mechanical properties
- High crack bridging capability
- Resistant to puncture
- Resistant to standing water
- Thermoset – do not soften at high temperature
- Remain elastic at low temperatures
- (Tg approx – 45 °C)
- Can be re-coated after a few hours
- Can accept light foot traffic after 4 hours @ 20 °C

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 1504-2 - Surface protection product for concrete - Coating

PRODUCT INFORMATION

Chemical Base	Polyurea	
Packaging	Part A	10 kg drums
	Part B	2 kg drums
Colour	Grey	
Shelf Life	Part A: 9 months from date of production Part B: 9 months from date of production	
Storage Conditions	The product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +15 °C and +25 °C. Do not expose to direct sunlight. Always refer to packaging.	
Density	Part A	1.42 g/cm ³
	Part B	1.23 g/cm ³
	Mix	1.37 g/cm ³

Viscosity	Part A	9000 mPas
	Part B	2000 mPas
	Mix	6300 mPas

TECHNICAL INFORMATION

Shore A Hardness	~ 90	
Tensile Strength	~6 N/mm ²	(DIN 53504)
Elongation at Break	~ 200 %	(DIN 53504)

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B = 100 : 20 (by weight)	
Consumption	~1.37 kg / m ² / mm	
Ambient Air Temperature	+5 °C min. / +35 °C max.	
Relative Air Humidity	< 85 %	
Substrate Temperature	+5 °C min. / +35 °C max.	
Pot Life	at 10°C	35 minutes
	at 20°C	20 minutes
	at 30°C	15 minutes
Open Time	at 10°C	240 minutes
	at 20°C	150 minutes
	at 30°C	120 minutes
Curing Time	at 10°C	min. 8 hours
	at 20°C	min. 5 hours
	at 30°C	min. 3 hours
Waiting Time / Overcoating	at 10°C	min. 48 hours
	at 20°C	min. 24 hours
	at 30°C	min. 12 hours
Drying time	at 10°C	7 days
	at 20°C	5 days
	at 30°C	3 days

VALUE BASE

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

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.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

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 500 g/l (Limit: Stage 2, 2010). The VOC content for Sikalastic® M 686 is < 500 g/l (for the ready to use product).

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The preparation of the substrate and the use of the appropriate primer are of paramount importance. All surfaces to which Sikalastic® M 686 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 screeds

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 or scabbling is the preferred method.

Release oil and other contaminants which may impair adhesion must be removed prior to application of the primer.

Iron and steel

Iron and steel should be sand blasted to Sa 2.5 finish prior to application of the primer.

Primer

There are several priming options dependant on the type and condition of the substrate. Contact the Sika technical department for guidance.

MIXING

Sikalastic® M 686 is supplied in working packs which are pre-packaged in the exact ratio. Before mixing, pre-condition both the A and B components to a temperature of approximately 15 to 25 °C. It is important to maintain the Part A (10 kg) component at these temperatures to ensure it remains mobile and workable .

Pour the entire contents of Part A into the container of Part B. DO NOT MIX BY HAND. Mix with a mechanical drill and paddle at a low speed (approx. 300 rpm) for at least 3 minutes. Scrape the sides and the bottom of the container several times to ensure complete mixing. Keep the mixer bladed fully submersed in the coating to avoid introducing air bubbles. DO NOT WORK OUT OF THE ORIGINAL CONTAINER. After proper mixing to a homogeneous consistency, pour the mixed Parts A and B into a clean container and mix for a further minute.

APPLICATION

Sikalastic® M 686 is poured onto the prepared substrate and spread with a notched trowel or spreader (rubber or steel). The build to vertical applications can be improved by the addition of approximately 2% by weight of Sika Extender T to the mixed product (see separate data sheet). After the application the material needs to be treated by spike roller to achieve a smooth and regular surface.

The curing time of the material is influenced by the ambient, material and substrate temperatures. At low temperatures, the chemical reactions are slowed down, this lengthens the pot-life, open time and curing times. High temperatures speed up the chemical reactions thus the time frames mentioned above are shortened accordingly. To fully cure, the material, substrate and application temperatures should not fall below the minimum recommended. The temperature of the substrate must be at least 3 K above the dew point both during and for at least 6 hours after application (at 15 °C).

Sikalastic® M 686 has sufficient UV and weather resistance to be used in exposed applications without protection for the intended use. Anti-slip to floor or an aggregated finish to vertical upstands can be obtained by fully blinding the “wet” surface with a suitable kiln dried aggregate. Yellowing of the membrane will occur if left uncoated, a number of topcoats are available if colour stability is required . Contact the Sika technical department for guidance .

CLEANING OF TOOLS

Clean all tools with Thinner C immediately after use. The application equipment must be cleaned and filled with Mesamoll. Hardened material can only be removed mechanically.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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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