

PRODUCT DATA SHEET

Sikalastic® M 640

(formerly MSeal M 640)

Cost effective, one-component, liquid applied, polyurethane based, waterproofing membrane

DESCRIPTION

Sikalastic® M 640 is a ready-to-use, one-component, cold applied, low viscosity polyurethane base, elastomeric membrane for roof waterproofing. Sikalastic® M 640 cures to form a seamless and durable waterproofing membrane, suitable for exposed roof areas and structure.

USES

Sikalastic® M 640 may only be used by experienced professionals.

Designed for the following waterproofing applications:

- Roof waterproofing for new constructions and refurbishment projects
- Waterproofing of roofs, balconies and terraces
- Waterproofing structures with numerous details such as penetrations, drains, roof lights and complex geometry
- Waterproofing existing substrates (e.g. concrete, bituminous membrane, metal, wood, unglazed ceramic tiles)

FEATURES

- One-component, easy and ready to use
- Cold applied - requires no heat or flame
- Seamless membrane
- Excellent crack bridging ability, even at low temperatures
- High elasticity and flexibility
- Thermal resistance, the product retains its properties even at high temperatures
- Resistance to cold temperatures: The Product retains its elasticity even at -20 °C
- Easily recoated if needed - no need to remove the existing one
- Vapour permeable, allows substrate to breathe
- Easy to apply, low viscosity
- Economic – provides a cost efficient life cycle extension of failing roofs

CERTIFICATES AND TEST REPORTS

- CE Marking and Declaration of Performance to European Technical Assessment (ETA) No 24/0043 based on ETAG 005 Part 6 – Liquid-applied roof waterproofing using kits based on polyurethane.

PRODUCT INFORMATION

Composition	One-component aromatic polyurethane
Packaging	1.0 kg, 6.0 kg and 25.0 kg metal pails
Colour	White and Grey
Shelf life	12 months from date of production
Storage conditions	The product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +25 °C. Higher storage temperatures may reduce shelf life of product. Always refer to packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.

Density	~1.40 kg/l (at 20 °C)	(EN ISO 2811-1 / DIN 53217 / ASTM D1475)
Flash point	+35 °C (closed cup)	(ASTM D93)
Viscosity	200–3500 mPa·s	(ASTM D4287)
Solid content by mass	~83 %	

TECHNICAL INFORMATION

Shore A hardness	~60	(DIN 53505)
Tensile strength	> 6 N/mm ²	(EN ISO 527-3)
Tensile strain at break	~600 % (at 23 °C)	(EN ISO 527-3)
Resistance to thermal shock	Up to +200 °C (short-term)	
External fire performance	Broof (t1)	
Reaction to fire	Class E	
Service temperature	Minimum	-20 °C
	Maximum	+90 °C

APPLICATION INFORMATION

Consumption	<p>Sikalastic® M 640 is applied in minimum 2 coats. Appox. 1.5–2.0 kg/m² depending on the system configuration. For airless application consumption is maximum 0.8 kg/m² per coat. Note: Do not exceed the maximum recommended consumption per layer of 0.8 kg/m², as this will cause blisters on the surface of the membrane.</p>	
Ambient air temperature	Minimum	+5 °C
	Maximum	+35 °C
Relative air humidity	≤ 80 % r.h.	
Dew point	Beware of condensation. The substrate and uncured material must be at least 3 °C above dew point to reduce the risk of condensation or blooming of the membrane finish.	
Substrate temperature	Minimum	+5 °C
	Maximum	+35 °C
Substrate moisture content	<p>≤ 4 % pbw moisture content. The following test methods can be used:</p> <ul style="list-style-type: none"> ▪ Sika®-Tramex meter ▪ CM - measurement ▪ Oven-dry-method ▪ No rising moisture according to ASTM (Polyethylene-sheet). 	

Substrates

<u>Substrate</u>	<u>Primer</u>
Concrete, Ceramic tiles (unglazed)	Sikalastic®-1 C Primer PU, Sika® Concrete Primer
Concrete	Sikafloor®-151
Bituminous felt & coating	Sikalastic® Metal Primer N
Metals Ferrous or galvanised metals, lead, copper, aluminium, brass or stain- less steel	Sikalastic® Metal Primer N
Wooden substrates	Consult Sika Technical Department
Existing Sikalastic® membrane	Sikalastic®-1 C Primer PU or Sika® Concrete Primer

Note:

For the consumption rates and waiting time / overcoating please refer to the PDS of the appropriate primer.

Other substrates must be tested for their compatibility. If in doubt, apply a test area first.

Pot Life	~40 minutes (at 20 °C)
Curing time	Fully cured after 7 days
Tack free time	6 hours (at 25 °C & 55 % r.h.)
Waiting time to overcoating	6–24 hours
Applied product ready for use	~24 hours

SYSTEM INFORMATION

Systems

Continuously Reinforced Roof Waterproofing

Sikalastic® M 640 is applied in one coat reinforced with Sikalastic® Fleece-50 and sealed with a further coat of Sikalastic® M 640

<u>Layer</u>	<u>Product</u>	<u>Consumption</u>
Primer	Refer to primer table	Refer to the PDS of primer
Base coat	Sikalastic® M 640	≥ 1.0 kg/m ²
Reinforcement	Sikalastic® Fleece-50	–
Second coat	Sikalastic® M 640	≥ 0.8 kg/m ²
Top coat	Sikalastic®-670 TC	≥ 0.3 kg/m ²

Note:

Sikalastic®-670 TC is not required for non-exposed applications.

Locally Reinforced Roof Waterproofing

Sikalastic® M 640 is applied in minimum 2 coats. Locally reinforced on detailing, joint treatment and other areas with expected stress or movement, using strips of Sikalastic® Fleece-50, Sika® Flexitape Heavy or Sika® Joint Tape SA

<u>Layer</u>	<u>Product</u>	<u>Consumption</u>
Primer	Refer to primer table	Refer to the PDS of primer
Base coat	Sikalastic® M 640	0.80 kg/m ²
Second coat	Sikalastic® M 640	0.70 kg/m ²
Top coat	Sikalastic®-670 TC	≥ 0.3 kg/m ²

Note:

For the consumption rates and waiting time / overcoating please refer to the PDS of the appropriate product.

Topcoat is recommended to increase system performance.

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.

FURTHER DOCUMENTATION

General Method Statement - Sikalastic® M 640

IMPORTANT CONSIDERATIONS

Installation work must only be carried out by Sika trained and approved contractors, experienced in this type of application.

- Do not use Sikalastic® M 640 for indoor applications without proper ventilation.
- Do not apply Sikalastic® M 640 on substrates with rising moisture.
- Do not dilute Sikalastic® M 640 with any solvent.
- Do not apply Sikalastic® M 640 close to the air intake vent of a running air conditioning unit. Switch-off units and seal intakes before applying.
- On substrates likely to exhibit outgassing, apply Sikalastic® M 640 during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur from rising air.
- Do not apply Sikalastic® M 640 directly on Sikalastic® Insulation boards. Instead use Sikalastic® Carrier between Sikalastic® Insulation board and Sikalastic® M 640.
- Areas with high movement, irregular substrates, or timber based roof decks require a complete layer of Sikalastic® Carrier.
- Sikalastic® M 640 is not suitable for permanent water immersion.
- Volatile bituminous materials may stain and/or soften below the coating.
- Low melting point bituminous materials may need priming – using a darker shade also helps hide any staining from the volatiles.

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

EQUIPMENT

Substrate preparation equipment

- Abrasive blast cleaning / planing / scarifying or grinding equipment
- High pressure power washer

Mixing Equipment

- Electric single paddle mixer

Application Equipment

- Brush
- Roller
- Airless spray

SUBSTRATE QUALITY

Concrete substrates must be sound and of sufficient compressive strength (≥ 25 N/mm²) with a minimum pull off strength of 1.5 N/mm²

SUBSTRATE PREPARATION

The surface must be of sufficient structural strength, clean, dry and free of dirt, oil, grease and other contamination. Depending on the material the substrate must be primed and mechanically cleaned. Grinding may be necessary to level the surface. Complete roof system must be designed and secured against wind uplift loadings.

Suitable substrates are such as: concrete, bituminous membrane, metal, unglazed ceramic tiles and wooden substrates.

MIXING

Prior to application, stir Sikalastic® M 640 gently but thoroughly at least for 1 minute in order to achieve a homogeneous mixture. For mixing, an electric single paddle mixer (300–400 r.p.m.) with a spiral blade can be used. Over mixing must be avoided to minimize air entrainment.

APPLICATION

Prior to system application, confirm substrate moisture content, r.h. and dew point.

Ensure that the priming coat has cured, tack-free prior to Sikalastic® M 640 application.

For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer.

Locally Reinforced Roof Waterproofing:

Sikalastic® M 640 is applied in two coats. Follow the indicated overcoating period between subsequent coats. Roof coatings require partial reinforcement over areas of stress or expected movement e.g. joints, overlaps, detailing, crack bridging etc. Use Sika® Joint Tape SA or strips of Sikalastic® Fleece-50. For joints with moderate movement e.g. Metal Sheet use Sika® Flexitape Heavy incorporating bond-break or Sika® Joint Tape SA. Always start application on detailing areas with reinforcing layers.

Continuously Reinforced Roof Waterproofing:

Sikalastic® M 640 is applied in combination with Sikalastic® Fleece-50. Overcoating of bitumen membranes must be continuously reinforced.

1. Apply the first coat, for correct consumption refer to the table of the respective system of Sikalastic® M 640. Work only so far in advance that the material stays liquid.
2. Roll in the Sikalastic® Fleece-50 and ensure that there are no bubbles or creases. Overlapping must be a minimum 5 cm and ensure overlaps are sufficiently wet to bond.
3. The roller may require only a little extra material to keep wetted but no further significant material needs to be added at this stage.
4. After the coat is dry enough to walk on, seal the roof area with second coat of Sikalastic® M 640 at a minimum consumption of the respective system. Always begin with detailing prior to start of waterproofing application on the horizontal surface. For details follow steps 1-4.

Note: The applicator must wait 6–24 hours between coats. If the overcoating time is exceeded, more than 3 days, Sika® Concrete Primer or Sikalastic®-1 C Primer PU must be applied at a consumption rate of ~100 g/m².

CLEANING OF EQUIPMENT

Clean all tools and application equipment with a suitable thinner (Xylene / MEK / Acetone) immediately after use. Hardened 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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ISO 9001, 14001, 45001 – SGS
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ISO 9001, 14001 – TÜV
Sika MB Construction Chemicals LLC
Sika Construction Chemicals for Manufacturing LLC
ISO 9001 – LMS
Sika MB LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



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