

PRODUCT DATA SHEET

Sikalastic® M 640

(formerly MasterSeal® 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 structures.

USES

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

Designed for the following waterproofing applications:

- Roof waterproofing for new construction 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, asbestos cement, metal, wood, unglazed ceramic tiles)
- For exterior use only

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	Elastomeric aromatic polyurethane
Packaging	1.0 kg, 6.0 kg and 25.0 kg metal pails
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.
Colour	White, Grey and Terracota

Density	~1.40 kg/l (20 °C)	(EN ISO 2811-1 / DIN 53217 / ASTM D1475)
Flash point	+35 °C (closed cup)	(ASTM D93)
Solid content by mass	~83 %	
Viscosity	2000 - 3500 mPa·s	(ASTM D4287)

TECHNICAL INFORMATION

Shore A hardness	60 (±5)	(DIN 53505)
Tensile strength	> 6 N/mm ²	(EN ISO 527-3)
Tensile strain at break	~ 600 % (at 23°C)	(EN ISO 527-3)
Service temperature	Minimum	-20 °C
	Maximum	+90 °C
Resistance to thermal shock	up to +200 °C (short-term)	
External fire performance	Broof (t1)	
Reaction to fire	Class E	

SYSTEM INFORMATION

Systems

Reinforced Roof Waterproofing

Sikalastic® M 640 is applied in one coat reinforced with Sika® Reemat Premium or Sikalastic® Fleece and sealed with a further coat of Sikalastic® M 640

Layer	Product	Consumption
Primer	Refer to below primer table	Refer to PDS of the primer
Base coat	Sikalastic® M 640	≥ 1.0 kg/m ²
Reinforcement	Sika® Reemat Premium / Sikalastic® Fleece	–
Second coat	Sikalastic® M 640	≥ 0.8 kg/m ²
Top coat	Sikalastic®-670 TC / Sikalastic®-701	≥ 0.3 kg/m ²

Note: Sikalastic®-670 TC / Sikalastic®-701 is not required to not exposed roofs.

No-Reinforced Roof Waterproofing

Sikalastic® M 640 is applied in 1 or 2 coats

Layer	Product	Consumption
Primer	Refer to below primer table	Refer to PDS of the 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 / Sikalastic®-701	≥ 0.30 kg/m ²

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

Note: It always recommended to apply a top coat, in order to increase system performance.

APPLICATION INFORMATION

Consumption	Sikalastic® M 640 is applied in 1 or 2 coats. Appox. 1,5 - 2,0 kg/m ² depending on the system configuration. For airless application consumption is maximum 0.8 kg/m ² per coat. Note: Do not exceed the maximum recommended consumption per layer 0.8 kg/m ² , as this will cause blisters on the surface of the membrane.	
Ambient air temperature	Minimum	+5 °C
	Maximum	+35 °C
Relative air humidity	≤ 80 % r.h.	
Dew point	Beware of condensation! The substrate and uncured membrane 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	≤ 4 % pbw moisture content. The following test methods can be used: <ul style="list-style-type: none"> ▪ Sika®-Tramex meter ▪ CM - measurement ▪ Oven-dry-method No rising moisture according to ASTM (Polyethylene-sheet).	
Substrates	Substrate	Primer
	Concrete, Ceramic tiles (unglazed)	Sikalastic®-1 C Primer PU, Sika® Bonding Primer, Sika® Concrete Primer or Sikalastic® Primer MP
	Bituminous felt & coating	Sikalastic® Metal Primer N
	Metals	Sikalastic® Metal Primer N
	Ferrous or galvanised metals, lead, copper, aluminium, brass or stainless steel	
	Wood	Sikalastic®-1 C Primer PU, Sika® Bonding Primer, Sika® Concrete Primer or Sikalastic® Primer MP
	Existing Sikalastic® membrane	Sika® Reactivation Primer, 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 min (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	Appox. 12 hours	

BASIS OF PRODUCT DATA

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.

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.
- 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.
- Sikalastic® M 640 may exhibit slight chalking at the surface – do not use run off water for live fish tanks, etc.
- Low melting point bituminous materials may need priming – using a darker shade also helps hide any staining from the volatiles.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing 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 ($\geq 25 \text{ N/mm}^2$) with a minimum pull off strength of 1.5 N/mm^2

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.

Refer to the Sika Method Statement: Sikalastic® M 640 Suitable substrates are such as: concrete, bituminous membrane, metal, asbestos cement, unglazed ceramic tiles and wooden.

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

Prior the application of Sikalastic® M 640 the priming coat must have cured, tack-free. For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer.

No-Reinforced Roof Waterproofing:

Sikalastic® M 640 is applied in two coats. Prior to the application of a 2nd coat the indicated waiting time of overcoating shall be allowed. Roof coatings may need partial reinforcement over areas of stress or predictable movement e.g. joints, overlaps, detailing, crack bridging etc. Use Sika® Joint Tape SA or sections of Sika® Reemat Premium / Sikalastic® Fleece. For joints with moderate movement e.g. Metal Sheet use Sika® Flexitape Heavy incorporating bond-break or Sika® Joint Tape SA .

Reinforced Roof Waterproofing:

Sikalastic® M 640 is applied in combination with Sika® Reemat Premium / Sikalastic® Fleece. Over coating of bitumen membrane has to be full reinforced.

1. Apply the first coat, for correct consumption refer to the table of the relevant system of Sikalastic® M 640. Work only so far in advance that the material stays liquid.
2. Roll in the Sika® Reemat Premium / Sikalastic® Fleece 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 relevant system.

Always begin with details prior starting with water-proofing the horizontal surface. For details follow step 1-4.

Note: The applicator must wait 6 - 24 hours between coats. If the overcoating time is exceeded, more than 3 days, Sika® Reactivation Primer, 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 Sika® Thinner C immediately after use. Hardened or cures 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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