

PRODUCT DATA SHEET

Sikalastic®-641

Polyurethane low odour liquid applied membrane for roof waterproofing



DESCRIPTION

Sikalastic®-641 is a 1-part polyurethane, reinforced, low odour, cold-applied liquid membrane. It provides a UV-stable, seamless, elastic, low maintenance, durable, smooth waterproof finish using Sika's unique i-Cure technology. The product is suitable for hot and cold climates.

USES

Sikalastic®-641 may only be used by experienced professionals.

- Top coat for SikaRoof® i-Cure-15/18/22 systems in both new construction and refurbishment projects
- Top coat for the ETA approved, low odour SikaRoof iCure-15/18/22 systems.
- Waterproofing structures with numerous details such as penetrations, drains, roof lights and complex geometry
- Cost efficient service life extension of failing roofs
- As a reflective top coat (traffic white ~RAL 9016, available on indent) providing cool roof characteristics and solar efficient roofs
- For odour sensitive areas
- Only for exterior use

CHARACTERISTICS / ADVANTAGES

- 1-part, no mixing, easy and ready to use
- Thickness: ~1.50–2.2 mm
- Resistant to UV exposure
- Highly reflective (~RAL 9016, available on indent)
- Resistant to yellowing
- Cold applied – requires no heat or flame
- Low odour - suitable for odour sensitive projects
- High solids content
- Seamless
- Easy to detail with Sika® Reemat Premium

- Easily recoated - no removal required
- Vapour permeable
- Applied by brush / roller
- Elastic and crack bridging
- Retains flexibility at low temperatures
- Good adhesion to most construction substrates
- Fast curing
- Resistant to common atmospheric conditions

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 MRC 4 (Option 2): Building Product Disclosure and Optimization - Material Ingredients
- BRE Environmental Product Declaration (EPD)

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to ETA 14/0177
- European Technical Assessment ETA 14/0177 based on ETAG 005 Part 1 and 6 - Liquid-applied roof waterproofing using kits based on polyurethane
- External Fire Exposure to Roofs - 10 Year System BS 476 Part 3: 2004, Sikalastic®-641, Exova, Test report No. 336139
- External Fire Exposure to Roofs - 10 Year System DD CEN/TS 1187:2012 Test 1, Sikalastic®-641, Exova, Test report No. 336143
- External Fire Exposure to Roofs - 25 Year System BS 476 Part 3, Sikalastic®-641, Exova, Test report No. 336140
- External Fire Exposure to Roofs - 25 Year System DD CEN/TS 1187:2012 Test 1, Sikalastic®-641, Exova, Test report No. 336141
- Fire Testing with Burning Brands, Wind and Radiant Heat- 10 Year System DD CEN/TS 1187:2012 Test 4, Sikalastic®-641, Exova, Test report No. 336142
- Fire Testing with Burning Brands, Wind and Radiant Heat- 25 Year System DD CEN/TS 1187:2012 Test 4, Sikalastic®-641, Exova, Test report No. 336141

- Odour comparison Sikalastic®-641, Odournet, Report No. 456-2014-17
- Odour comparison Sikalastic®-641, Odournet, Report No. 456-2014-19
- Reaction to Fire - 25 Year System EN 13501-5: 2007 + A1: 2009, Sikalastic®-641, Exova, Classification report No. WF 336207
- Roof Coverings Exposed to External Fire - 10 Year System EN 13501-1: 2005 + A1: 2009 Test 4, Sikalastic®-641, Exova, Classification report No. WF 336203
- Roof Coverings Exposed to External Fire - 10 Year System EN 13501-1: 2005 + A1: 2009, Sikalastic®-641, Exova, Classification report No. WF 336206
- Roof Coverings Exposed to External Fire - 10 Year System EN 13501-5: 2005 + A1: 2009, Sikalastic®-641, Exova, Classification report No. WF 336204
- Roof Coverings Exposed to External Fire - 25 Year System EN 13501-1: 2005 + A1: 2009 Test 4, Sikalastic®-641, Exova, Classification report No. WF 336202
- Roof Coverings Exposed to External Fire - 25 Year System EN 13501-5: 2005 + A1: 2009, Sikalastic®-641, Exova, Classification report No. WF 336205

PRODUCT INFORMATION

Chemical Base	Aliphatic polyurethane		
Packaging	15 litre containers.		
Colour	Slate grey (~RAL 7015)		
Shelf Life	9 months from date of production		
Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +0 °C and +25 °C. Always refer to packaging.		
Density	~1.42 kg/l		(EN ISO 2811-1)
	Value +23°C		
Solid content by weight	~88.0 % (+23 °C / 50 % r.h.)		
Solid content by volume	~84.0 % (+23 °C / 50 % r.h.)		

TECHNICAL INFORMATION

Tensile Strength	<u>Unreinforced</u>	<u>6.0 N/mm²</u>	(EN ISO 527-3)
Elongation at Break	<u>Unreinforced</u>	<u>280 %</u>	(EN ISO 527-3)
External Fire Performance	B _{Roof} (t1) + (t4) over Build up roofing system		(ENV 1187)
Reaction to Fire	<u>Euroclass E</u>		(EN 13501-1)
Solar Reflectance Index	≥ 108*		(ASTM 1980)
	* All values refer to the initial (properly cured, non-weathered) status of Sikalastic®-641 white (RAL 9016, available on indent).		
Service Temperature	-30 °C to +90 °C		

SYSTEM INFORMATION

System Structure	Refer to System Data Sheet: <ul style="list-style-type: none"> ▪ SikaRoof® i-Cure-15 ▪ SikaRoof® i-Cure-18 ▪ SikaRoof® i-Cure-22 	
Dry film thickness	Roofing system	Thickness
	SikaRoof® i-Cure-15	1.5 mm
	SikaRoof® i-Cure-18	1.8 mm
	SikaRoof® i-Cure-22	2.2 mm
System Performance	Refer to System Data Sheets: SikaRoof® i-Cure systems.	

APPLICATION INFORMATION

Product Temperature	It is recommended the product is stored under warm conditions (+20 °C) prior to application at temperatures below +10 °C.	
Ambient Air Temperature	+5 °C min / +40 °C max	
Relative Air Humidity	20 % r.h. min / 85 % r.h. max	
Substrate Temperature	+5 °C min. / +60 °C max.	
Dew Point	Beware of condensation. The substrate and uncured applied product must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the surface of the applied product.	
Substrate Moisture Content	≤4 % parts by weight. Test method: Sika®-Tramex meter No rising moisture according to ASTM (Polyethylene-sheet).	
Substrate Pre-Treatment	Refer to System Data Sheets: SikaRoof® systems.	
Pot Life	~1 hour (+20 °C / 50 % r.h.) Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity. Material in opened containers must be applied immediately. In opened containers, the material will form a film after ~1 hour.	
Waiting Time / Overcoating	Ambient conditions	Minimum waiting time¹
	+5 °C / 50 % r.h.	~18 hours
	+10 °C / 50 % r.h.	~8–10 hours
	+20 °C / 50 % r.h.	~4–6 hours
	+30 °C / 50 % r.h.	~4 hours

1 After four days, the surface must be cleaned and primed with Sika® Reactivation Primer before continuing.

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

Applied Product Ready for Use	Ambient conditions	Rain resistant¹	Touch dry	Full cure²
	+5 °C / 50 % r.h.	1 hour	10–12 hours	24 hours
	+10 °C / 50 % r.h.	1 hour	6–8 hours	18–24 hours
	+20 °C / 50 % r.h.	1 hour	4–6 hours	12–18 hours
	+30 °C / 50 % r.h.	1 hour	3–5 hours	8–12 hours

1 Be aware that the impact of heavy rain or rain showers can physically mark or damage the still liquid membrane.

2 Application at higher than recommended film thicknesses may result in a prolonged “soft” feel to the coating. This will eventually cure.

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

FURTHER DOCUMENTS

- Sika® Method Statement: SikaRoof® i-Cure systems
- Sika® System Data Sheets: SikaRoof® i-Cure systems

LIMITATIONS

- Do not apply Sikalastic®-641 on substrates with rising moisture.
- Sikalastic®-641 is not suitable for permanent water immersion.
- On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur from rising air.
- Do not dilute with solvent.
- Do not apply Sikalastic®-641 directly on Sikalastic® Insulation boards. Instead use Sikalastic® Carrier between Sikalastic® Insulation board and Sikalastic®-641.
- Volatile bituminous materials may stain and/or soften below the coating.
- Areas with high movement, irregular substrates, or timber-based roof decks require flexible reinforcement at joints with use of Sikalastic®-100 SA Tape or Sika® Flexitape Heavy.
- Do not apply cementitious products (e.g. tile mortars) directly onto Sikalastic®-641.
- Do not use Sikalastic®-641 for indoor applications.
- Penetrations and fixings such as handrails etc. must be protected with tape or plastic wrapping.
- Application of Sikalastic®-641 in confined spaces must be undertaken in accordance with the Material Safety Data Sheet recommendations.
- Do not apply close to air intake vents of running air conditioning units unless they have been switched off or isolated as vapour may be drawn into the building.
- All areas requiring corrosion protection must be applied over Sikalastic® Metal Primer that has been applied directly to bright metal.
- All joints, areas subject to differential movement, guttering and drainage channels and repairs, must be treated with localised, flexible reinforcement using Sikalastic® -100 SA Tape or Sika® Flexitape Heavy.
- Adhesion suitability must be verified by carrying out preliminary trials before full application together with adhesion tests as required.
- The application of the system must be approached as one operation. Work in advance so the application stages can be completed within the overcoating times. Finish the coating system completely before progressing to the next area.
- Application of the system stages must be completed within the overcoating times otherwise the system performance may be compromised.
- After application, Sikalastic®-641 must be protected from heavy rain or rain showers until dry to prevent surface damage.

- Application at higher than recommended film thicknesses may result in a prolonged “soft” texture to the coating. This will eventually cure.

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.

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

According to the EU Directive 2004/42/CE, the maximum allowed content of VOC (product category IIA / i type sb) is 500 g/l (Limits 2010) for the ready to use product. The maximum content of Sikalastic®-641 is < 500 g/l VOC for the ready to use product.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

General

Refer to System Data Sheet or System Method Statement for information on preparing substrates to receive the base coat application of Sikalastic-631. Apply Sikalastic®-641 to the fully cured Sikalastic-631 within four days after the base coat application. If more than four days has passed, the base coat surface must be prepared with Sika Reactivation Primer prior to top coat application. Refer to the PDS for Sika Reactivation Primer for further information.

Existing Sikalastic®-641 system

Clean the membrane surface using a power wash at ~14 N/mm² (2000 psi) including detergent then rinse thoroughly and allow to dry. Existing Sikalastic®-641 systems older than four days must be prepared with Sika Reactivation Primer as outlined above.

MIXING

Sikalastic®-641 is supplied ready for use. Before application, stir for a minimum of 1 minute using mixing paddle and drill or other suitable equipment to mix the liquid and all the coloured pigment until a uniform colour has been achieved. Over-stirring must be avoided to minimise air entrainment.

APPLICATION

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.

General

Always begin application with detailing before installation of the main horizontal surfaces.

Primer

Pour the appropriate mixed primer onto the prepared substrate and apply by brush or appropriate roller. Ensure a continuous, pore free coat covers the substrate. Confirm primer waiting / overcoating time has been achieved before applying successive products. Refer to individual primer Product Data Sheet.

Base coat

Refer to the System Data Sheet or the System Method Statement.

Reinforcement

Refer to the System Data Sheet or the System Method Statement.

Top coat

Pour stirred Sikalastic®-641 onto the fully cured, reinforced base coat layer, and apply evenly by brush or short piled roller at the required consumption rate in 2

directions at right angles to each other. Confirm overcoating times before application. Refer to the System Data Sheet or the System Method Statement.

Ensure each application / coat is clean and dry before applying next coat.

Note: Material will dry on the surface in around 30 minutes depending on temperature and humidity conditions. Always maintain a wet edge and finish surface as work proceeds. Returning to re-work areas that are partially dried may damage the surface.

CLEANING OF TOOLS

Clean all tools and application equipment with Thinner C immediately after use. 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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Product Data Sheet

Sikalastic®-641

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