BUILDING TRUST

PRODUCT DATA SHEET

Sikalastic®-685

1-part, UV-stable, bituminous liquid applied membrane

PRODUCT DESCRIPTION

Sikalastic®-685 is a 1-part, water-based, elastomeric, bituminous, liquid applied membrane for roof waterproofing. It has good resistance to specific chemicals, is UV-stable and is highly elastic. It is an advanced and long-lasting waterproofing solution suitable for occasional foot traffic.

USES

Sikalastic®-685 is used for:
- Flat and sloped fully exposed roof structures
- External balcony and terrace decks
- Parapet walls and flashings
- Lining gutters and troughs
- Sealing bitumen sheet membrane overlaps
- Patching of mineral finished bitumen sheet membranes
- Joint sealing

Please note:
- The Product is not suitable for contact with potable water.
- The Product is not suitable for permanent water immersion.

CHARACTERISTICS / ADVANTAGES

- No joints or seams which reduces the risk of water leakage
- Accommodates substrate movement ensuring continuous waterproofing
- Increased life expectancy in permanent sunlight conditions
- Good resistance to UV exposure
- Good durability
- Low VOC emissions
- Tiles can be placed directly onto the membrane
- Very good crack-bridging ability
- Fully bonded to prevent water underflow
- Very good elongation
- 1-part ready to use
- Easy to apply
- Applied by brush, roller, trowel or airless spray

ENVIRONMENTAL INFORMATION

- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)

APPROVALS / STANDARDS

- CE marking and declaration of performance based on EN 1504-2:2004 Products and systems for the protection and repair of concrete structures — Surface protection systems for concrete — Coating
- CE marking and declaration of performance based on EN 14891:2012/AC:2012 Liquid-applied water impermeable products for use beneath ceramic tiling bonded with adhesives
- CE marking and declaration of performance based on EN 15814:2011+A2:2014 Polymer modified bituminous thick coatings for waterproofing — Definitions and requirements

PRODUCT INFORMATION

Chemical Base	Synthetic resins, bituminous emulsion, filler and additives.
Packaging	5 kg, 10 kg, 20 kg Refer to the current price list for available packaging variations.
Shelf Life	12 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 +5 °C and +30 °C. Always refer to the packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.

Colour	Cured colour	Grey, black and brown

Density	(1.50 ± 0.05) kg/L	(EN ISO 2811-1)
Flash Point	Non flammable	
Solid content by mass	(77.5 ± 4.5) %	(EN ISO 3251)
Viscosity	> 40 Pa·s	
Volatile organic compound (VOC) content	< 2 g/l	(EN ISO 11890-2)

TECHNICAL INFORMATION

Tensile Strength	Membrane	> 1,5 N/mm²	(EN ISO 527-3)
	Reinforced membrane	(500 ± 10) N/50mm	(EN 12311-2)
Elongation at Break	Membrane	> 140 %	(EN ISO 527-3)
	Reinforced membrane	(80 ± 20) %	(EN 12311-2)
Crack Bridging Ability	Tested at +20 °C	> 3.5 mm	(EN 14891)
	Tested at -5 °C	≥ 1.5 mm	
	Class CB2	No damage for crack width ≥ 2 mm and dry layer thickness ≥ 3 mm	(EN 15814)
Tensile adhesion strength	≥ 2.5 MPa		(EN 1542)
	Glass, steel and wood	≥ 1.0 N/mm²	(EN 14891)
	Concrete	≥ 1.5 N/mm²	
Service Temperature	Maximum	+80 °C	
	Minimum	-30 °C	
Flexibility at low temperature	-10 °C		(EN 1109)
Thermal Resistance	Tensile strength after hot water soaking, 4 weeks immersion at +70 °C	> 1.50 N/mm² (no loss)	(EN ISO 527-3)
	Elongation after hot water soaking, 4 weeks immersion at +70 °C	> 135 %	
Water Tightness	> 500 kPa		(EN 14891)
Permeability to Water Vapour	5 m ≤ S_d < 50 m - class II		(EN ISO 7783)
Chemical Resistance	Resistant to aggressive substances in natural ground water and soil. Contact Sika Technical Services for additional information.		
	Tensile strength after 4 weeks alkali immersion at +70 °C	> 2 N/mm² (no loss)	(EN ISO 527-3)
	Elongation after 4 weeks alkali immersion at +70 °C	> 90 %	

Behaviour after Artificial Weathering	Tensile strength after heat ageing, 4 weeks immersion at +80 °C	> 2 N/mm² (no loss)	(EN ISO 527-3)
	Elongation after heat ageing, 4 weeks immersion at +80 °C	> 115 %	
Artificial Ageing	No further change after 3000 hours		(ASTM G154-04)
Reaction to Fire	Class E		

SYSTEM INFORMATION

System Structure

UNREINFORCED MEMBRANE

Layer	Product
Base coat	1 × Sikalastic®-685
Top coat	1 × Sikalastic®-685

REINFORCED MEMBRANE

Reinforcement is required in areas with high movement (usually > 25 m²), over irregular substrates or to bridge cracks, joints and seams on the substrate as well as for detailing.

Layer	Product
Base coat	1 × Sikalastic®-685
Reinforcement	1 × Sika® Igolflex® F-05 or Sika® Reemat Premium
Top coat	1 × Sikalastic®-685

MEMBRANE UNDER CERAMIC TILES

Layer	Product
Base coat	1 × Sikalastic®-685
Reinforcement	1 × Sika® Igolflex® F-05 or Sika® Reemat Premium
Top coat	1 × Sikalastic®-685
Sika® tile adhesive	As required for the ceramic tile type and use (minimum C2 S1)
Ceramic tiles	-

APPLICATION INFORMATION

Consumption

Function	Product	Consumption
Unreinforced membrane	Sikalastic®-685	1.5–1.8 kg/m² per layer
Reinforced membrane	Sikalastic®-685	2.0–2.4 kg/m² per layer

Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply the Product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.

Product Temperature	Maximum	+35 °C
	Minimum	+5°C
Ambient Air Temperature	Maximum	+35°C
	Minimum	+5 °C
Relative Air Humidity	Maximum	80 %
Substrate Temperature	Maximum	+35 °C
	Minimum	+5 °C

Substrate Moisture Content	**Substrate**	**Test method**	**Moisture content**
	Cementitious substrates	Calcium carbide method (CM method)	≤ 4 %
	No rising moisture (ASTM D4263, polyethylene sheet)		
Tack Free Time	~6 hours at +20 °C Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.		
Waiting Time / Overcoating	~24 hours at +20 °C Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.		
Drying time	Total drying time is ~4 days at +20 °C After full cure, the product can be exposed to temporary pedestrian traffic. Note: Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.		

VALUE BASE

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

ECOLOGY, HEALTH AND SAFETY

Local safety regulations must be observed and it advisable to wear PPI when working with this product with particular attention paid to cutting and handling. Transportation Class: The product is not classified as hazardous good for transport. Disposal: The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

APPLICATION INSTRUCTIONS

EQUIPMENT

Select the most appropriate equipment for all applications required for the project:
SUBSTRATE PREPARATION EQUIPMENT
- Grinding equipment
- Manual or mechanical wire brushes
- High pressure power washer
- Industrial vacuuming equipment

For other types of preparation equipment, contact Sika Technical Services
MIXING EQUIPMENT
- Electric single-paddle mixer (300 to 400 rpm)

APPLICATION EQUIPMENT
- Brush
- Fleece roller
- Trowel
- Airless spray equipment

SUBSTRATE QUALITY

GENERAL
- The substrate must be uniform, free from dust, loose material, surface contamination, existing coatings, oil, grease, laitance and other materials which could reduce adhesion of the coating.
- To confirm adequate surface preparation and adhesion of the Product , carry out a small trial before full application together with adhesion tests as required.
- Where ancillary products are mentioned, refer to the relevant Product Data Sheet.
- Cementitious substrates must be sound with a minimum tensile adhesion strength of 1.5 N/mm². Weak surfaces must be removed and surface defects such as blow holes and voids must be fully exposed.
- Repairs to the substrate, filling of joints, blowholes, voids and surface levelling must be carried out using appropriate products from the Sikafloor®, Sikadur® and Sikagard® range of materials. Products must be cured before applying the Product.

Suitable substrates:
- Concrete and cementitious substrates
- Ferrous metals
- Glazed ceramic tiles
- Unglazed ceramic tiles
- Plasters
- Plasterboards
- Extruded polystyrene boards (XPS)
- Expanded polystyrene boards (EPS)
- Wood

Penetrations and structural joints
Note: Additional Sika joint sealing solutions must be used for connections around penetrations and for construction joints.

SUBSTRATE PREPARATION

CERAMIC TILES
Prior to application over ceramic tiles the following must be done to prepare the substrate:
1. Ensure all tiles are securely fixed.
2. Replace any broken, loose or missing sections.
3. Clean the tiles using a power washer and use Sika® Biowash as required.

BITUMINOUS MEMBRANES
Prior to application over bituminous membranes faced with mineral granules the following must be done to prepare the surface:
1. Ensure all membrane joints are properly bonded with no gaps or voids. Weld any unbonded membrane at the joints and details using flame or hot air.
2. For areas of the membrane with no granules heat the membrane until the surface begins to melt.
3. Immediately broadcast the melted surface with

quartz sand or mineral granules.

PRIMING

If tested or supported by experience, the Product can be used without a primer on many substrates.

Very porous substrates will need a primer to prevent excessive consumption of the base layer. Contact Sika Technical Services for additional information.

1. Test adhesion on project-specific substrates and agree on procedures with all parties before full project application.
2. Apply the appropriate Sika® primer to the required consumption onto the prepared dry surface. Note Refer to the individual Product Data Sheet of the primer.
3. Allow the primer to dry before membrane installation.

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

IMPORTANT

Protect from rain

After application, protect the Product from heavy rain or rain showers until dry to prevent surface damage.

IMPORTANT

No application on rising moisture

Do not apply on substrates with rising moisture.

IMPORTANT

Failure of reinforcement overlaps

To ensure a watertight seal is maintained all reinforcement overlaps must be to a minimum dimension.

1. Ensure side overlaps are greater than 100 mm and end overlaps are greater than 100 mm.

COATING

1. Always begin application with detailing (corners, upstands, joints) before installation of the main horizontal surfaces.
2. Apply the product evenly over the surface with a brush, fleece roller or air less spray equipment. Note The consumption is specified in Application Information.
3. Back roll the surface in two directions at right angles with a fleece roller.
4. For a reinforced membrane lay the Sika® Reinforcement onto the wet base coat. Note The reinforcement fibres must be fully encapsulated within the base coat.
5. IMPORTANT For reinforced systems, the second coat is applied immediately after the reinforcement layer. For unreinforced systems, wait the required drying time to apply the second coat. Apply a second coat evenly over the surface with a brush, fleece roller or air less spray equipment. Note The consumption is specified in Application Information.
6. Back roll the surface in two directions at right angles with a fleece roller.
7. The coating must be continuous, pore free and to the required surface finish.

MEMBRANE UNDER CERAMIC TILES

1. After the coating apply the appropriate Sika® tile adhesive over the top coat. Refer to Product Data Sheet.
2. Apply the ceramic tiles onto the adhesive in accordance with the manufacturer's instructions.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened material can only be removed mechanically or with Sika® Colma Cleaner.

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 the 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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