

PRODUCT DATA SHEET

Sikalastic®-840 ES

Liquid applied pure polyurea membrane for waterproofing

DESCRIPTION

Sikalastic®-840 ES is a two-part, elastic, 100% solids, very fast curing and coloured pure polyurea liquid applied membrane with good chemical resistance and drinking water approval. Sikalastic®-840 ES can only be applied with an appropriate two component hot spray machine.

Suitable for use in hot and tropical climatic conditions.

USES

Sikalastic®-840 ES may only be used by experienced professionals.

Sikalastic®-840 ES can be used for waterproofing and protection on steel, concrete, and many other substrates.

- Drinking water reservoirs and tanks
- Sewage and wastewater treatment plants
- Tank, bund and pit lining
- Underground structures

PRODUCT INFORMATION

Composition	Pure polyurea	
Packaging	Part A (Polyamine)	185 kg drum
	Part B (Isocyanate)	211 kg drum
	Part C (Pigment - optional)	4 kg bucket
Colour	<p>The mixture is yellow. Component A can be pigmented by adding the colour provided (Component C)</p> <p>Red, grey and blue colours are available.</p> <p>Only blue colour has been tested and certified for contact with drinking water.</p> <p>When the product is exposed to UV radiation (direct sunlight), it discolours.</p>	
Shelf life	12 months from date of production.	
Storage conditions	The packaging must be storage properly in original, unopened, and un-	

CHARACTERISTICS / ADVANTAGES

- High elongation
- Very fast reactivity and curing time
- Excellent crack bridging properties
- High chemical resistance
- High abrasion resistance
- 100% solids

APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to EN 1504-2 - Products and systems for the protection and repair of concrete structures. Surface protection systems for concrete.
- Certificate of Potability to Council Directive 98/83 on the quality of water intended for human consumption.

damaged sealed packaging, in dry conditions at temperatures between +10 °C and +30 °C. Protect from direct sunlight.

Density	Temperature	Part A	Part B
	+20 °C	~ 1.02 kg/l	~ 1.12 kg/l
+60 °C	~ 1.02 kg/l	~ 1.10 kg/l	

Viscosity	Temperature	Part A	Part B
	+20 °C	~ 600 mPas	~ 2000 mPas
+30 °C	~ 200 mPas	~ 1000 mPas	
+50 °C	~ 60 mPas	~ 400 mPas	
+70 °C	~ 40 mPas	~ 150 mPas	

TECHNICAL INFORMATION

Shore A hardness	~87	(ISO 868)
Shore D Hardness	~35	(ISO 868)
Abrasion resistance	10 mg (Taber, CS-10, 1000 c, 1 kg)	(ISO 5470-1)
Tensile strength	~16.2 MPa	(UNE EN ISO 527-1/3)
Tensile strain at break	~324 %	(ISO 37)
Tensile adhesion strength	≥1.5 MPa (or concrete failure)	(ISO 37)
Tear strength	~69 N/mm	(ISO 34-1 Method B)
Chemical resistance	Sikalastic®-840 ES is resistant to many different chemical products. Please, get in contact with the technical department for more information.	
Temperature resistance	Stable up to 180 °C. According to the folding test at low temperatures (UNE EN 495-5:2001), the elastomer can be bent at -45 °C for one hour without presenting cracks or fractures.	
Permeability to water vapour	~0.9 g/m ² · d Class II	(EN ISO 7783) (EN 1504-2)

APPLICATION INFORMATION

Mixing ratio	Part A : Part B = 1 : 1,17 (parts by weight) Part A : Part B = 1 : 1 (parts by volume)		
Consumption	Substrate	Product	Consumption
	Concrete	Sika® Concrete Primer or Sikafloor®-161(for submerged application) lightly broadcast with quartz sand, 0.3 – 0.8 mm, for example Sikadur®-507.	~ 0.4 kg/m ²
	Steel	1 x Sika Metal Primer	~ 0.2 kg/m ²
	Membrane	1 x Sikalastic®-840 ES	~ 1 kg/m ² /mm
These quantities are theoretical and do not include additional material that may be required due to substrate porosity, surface profile, level variations and waste, etc.			
Relative air humidity	< 85 %		
Dew point	Beware of condensation! The substrate and the uncured membrane must be at least 3 °C above the dew point to reduce the risk of condensation and to avoid damage to the		

	membrane termination.
Ambient air temperature	Min. 10 °C / Max. 40 °C
Substrate temperature	Min. 10 °C / Max. 40 °C
Substrate moisture content	< 4 % No rising damp according to ASTM (polyethylene film)
Waiting time to overcoating	Before applying Sikalastic®-840 ES over the primer, check its waiting time. Sikalastic®-840 ES is dry to touch very fast, in a few seconds after its application (~ 30 seconds). In normal conditions, the membrane resist rainwater in 10 minutes. Before applying Sikalastic®-840 ES over Sikalastic®-840 ES wait at least 2 minutes. Times are approximate and may be affected by changes in ambient conditions, particularly with temperature and relative humidity.

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 INFORMATION

IMPORTANT CONSIDERATIONS

- This product should only be applied by experienced professionals.
- The application should only be done by a two-component high pressure hot spray application equipment.
- The technical properties and behaviour of Sikalastic®-840 ES are not affected by exposure to UV radiation. Sikalastic®-840 ES may suffer aesthetic discoloration if exposed to UV radiation.
- For submerged elements use only Sikafloor®-161 lightly broadcast with quartz sand (0.3 – 0.8 mm for example Sikadur-507) as primer.
- For applications in contact with drinking water follow local regulations.

Note: always perform a test before the main application.

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.

SUBSTRATE QUALITY

To obtain a good penetration and adhesion to the substrate, concrete must have the following characteristics:

1. Evenness
2. Cohesive / compact with a minimum resistance of 25 N/mm² (compressive) and 1.5 N/mm² (pull off)
3. Regular and fine appearance
4. Free of cracks and crevices. If any, they should be treated first

5. Healthy, clean, dry, free of dust and loose materials or particles, surface slurry and free of grease, oil and moss
If any doubt, do a test before the main application.

SUBSTRATE PREPARATION

Concrete substrates must be mechanically prepared using an abrasive blasting or scarifying to lift the surface grout and achieve an open-pored textured surface.

Weak concrete and surface defects such as cavities or voids should be removed.

Repair the substrate by filling holes, voids and levelling the surface with appropriate products from the Sikafloor® range, SikaTop®, SikaDur®, SikaMonotop® ...

The substrate will be primed and levelled until the desired surface is achieved.

Any sharp irregularities should be removed with a polishing machine.

All dust and loose material should be removed from the surface before application of the product, using brush and/or vacuum cleaner.

Please refer to the product data sheet of the primer.

MIXING

Part A: Part B = 100:100 (by volume)

Before spraying, Part C (pigment) must be mixed with Part A until achieve a homogeneous mixture by mechanical means.

Then dose and mix with the hot spraying equipment of two suitable components. Both components must be heated between +70°C and +85°C. Mixing and dosing should be checked at regular intervals.

Sikalastic®-840 ES must not be diluted under any circumstances. Mix vigorously the component A resin material until get uniform mixture and homogeneous colour.

CLEANING OF EQUIPMENT

Clean tools and application equipment immediately after use with Thinner C. Once the material has hardened it can only be removed by mechanical means.

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.

SIKA NORTHERN GULF

Bahrain / Kuwait
Tel: +973 177 38188
sika.gulf@bh.sika.com
gcc.sika.com

SIKA SOUTHERN GULF

UAE / Oman / SIC
Tel: +971 4 439 8200
info@ae.sika.com
gcc.sika.com

Sika Saudi Arabia Limited

P.O. Box 112356, Jeddah
Kingdom of Saudi Arabia
Tel. +966 12 692 70 79
email: info@sa.sika.com
web: gcc.sika.com

ISO 9001: Sika Saudi Arabia Co. Ltd
ISO 14001: Sika Saudi Arabia Co. Ltd

Product Data Sheet
Sikalastic®-840 ES
September 2021, Version 02.01
020706201000000065

Sikalastic-840ES-en-AE-(09-2021)-2-1.pdf