

PRODUCT DATA SHEET

Sikalastic®-832 FR I

2-PART PURE POLYUREA BASED LIQUID MEMBRANE WITH HIGH PERFORMANCE OF REACTION TO FIRE, CLASS B-S2,D0



DESCRIPTION

Sikalastic®-832 FR I is a two part, elastic, 100% solids, very fast curing pure polyurea liquid applied membrane.

Sikalastic®-832 FR I can only be spray applied with special two part hot spray equipment.

USES

Sikalastic®-832 FR I may only be used by experienced professionals.

For roof waterproofing solutions in both new construction and refurbishment projects:

- Terraces
- Roof screeds

Coating for concrete protection according the requirements of EN 1504-2, for:

- Decks
- Bridges

Metal and concrete water retaining structures:

- Canals
- Tanks

Coatings for scenery and decorative structures.

CHARACTERISTICS / ADVANTAGES

- High performance of reaction to fire: Class B-s2,d0 (EN 13501-1:2009)
- Very fast curing time
- Easy to detail, even when accessibility is limited
- High elasticity (>280%)
- High impact, abrasion and puncture resistance
- Applicable in temperatures from -15°C to +70°C
- Performs in constant dry temperatures from -30°C to +140°C
- Total solid composition, without VOC

APPROVALS / CERTIFICATES

- Provided with CE-marking, according to EN1504-2.
- Reaction to Fire (EN13501-1:2009): Class B-s2,d0

PRODUCT INFORMATION

Composition	two part aromatic polyurea	
Packaging	Part A (resin)	205 kg black drums
	Part B (Isocyanate)	225 kg red drums
Colour	Liquid / RAL6010 (green), RAL6020 (green), RAL 3009 (red), RAL 7040 (grey), RAL 9005 (black).	
Shelf life	Part A (resin)	6 months from the date of production
	Part B (Isocyanate)	6 months from the date of production

Storage conditions	The packaging must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +25°C. Higher storage temperatures may reduce shelf life of product.		
Density	Part A	approx. 1.05 kg/l	(EN ISO 2811-1)
	Part B	approx. 1.12 kg/l	
	Density values determined at +23°C		
Solid content	~100%		
Viscosity	Part A	~750 mPas	(EN ISO 3219)
	Part B	~1800 mPas	
	Viscosity values determined at +23°C		

TECHNICAL INFORMATION

Shore D Hardness	~38	(EN ISO 868)
Abrasion Resistance	<100 mg (H22/1000 g/1000 rev.)	(EN ISO 5470-1)
Tensile Strength	~10 MPa	(ISO 527-1:2012)
Elongation at Break	~280%	(ISO 527-1:2012)
Tear Strength	~80 kN/m	(ISO 34-1:2010)
Reaction to Fire	B-s2, d0 with thickness >2.5 mm on substrate class A2-s1,d0 or A1 and density >1350 kg/m ³	(EN 13501-1:2009)
Service Temperature	-30°C min./+140°C max	

SYSTEMS

System Structure	Coating System	Product	Consumption
System for concrete structures		1-2 x Sika® Primer Roof PU, o Sika® Concrete Primer oppure Sika® Primer Roof EP, lightly broadcast with quartz sand, 0.4-0.7 mm	0.3-0.5 kg/m ² per layer 1.0 kg/m ²
		1 x Sikalastic®-832 FR I	~ 1.08 kg/m ² /mm (*)
System for carbon steel structures		1x Sikalastic® Metal Primer lightly broadcast with quartz sand, 0.4-0.7 mm	0.35 kg/m ² per layer 1.0 kg/m ²
		1 x Sikalastic®-832 FR I	~ 1.08 kg/m ² /mm (*)

(*) Reference thickness for Class of reaction to fire declared (B-s2,d0) is: 2.5 mm (2.7 kg/m²).

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc. Thickness of Sikalastic®-832 FR I will be designed according to use, type of solicitation to which is exposed and durability.

APPLICATION INFORMATION

Mixing Ratio	A:B=1:1 (by volume)
Product Temperature	A (resin):~80°C B(iso):~60°C

Ambient Air Temperature	-15°C min./+70°C max.																																						
Dew Point	Beware of condensation! The substrate temperature must be at least 3°C above dew point to reduce the risk of condensation on the surface.																																						
Substrate Moisture Content	< 4% pbw moisture content. Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet). For high moisture content substrates apply Sikafloor EpoCem® as a Temporary Moisture Barrier (TMB) system.																																						
Waiting Time / Overcoating	<p>Before to apply Sikalastic®-832 FR I on Sika® Prime Roof PU or on Sika® Concrete Primer, allow:</p> <table border="1"> <thead> <tr> <th>Substrate temperature</th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>+10°C</td> <td>2 h</td> <td>4 h</td> </tr> <tr> <td>+23°C</td> <td>1 h</td> <td>4 h</td> </tr> <tr> <td>+30°C</td> <td>1 h</td> <td>4 h</td> </tr> </tbody> </table> <p>Before to apply Sikalastic®-832 FR I on epoxy primer (Sika® Primer Roof EP) lightly broadcast, allow:</p> <table border="1"> <thead> <tr> <th>Substrate temperature</th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>+10°C</td> <td>24 h</td> <td>36 h</td> </tr> <tr> <td>+23°C</td> <td>12 h</td> <td>36 h</td> </tr> <tr> <td>+30°C</td> <td>8 h</td> <td>36 h</td> </tr> </tbody> </table> <p>Before to apply Sikalastic®-832 FR I on Sikalastic®-832 FR I, allow:</p> <table border="1"> <thead> <tr> <th>Substrate temperature</th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>+10°C</td> <td>10 s</td> <td>7 h</td> </tr> <tr> <td>+23°C</td> <td>10 s</td> <td>6 h</td> </tr> <tr> <td>+30°C</td> <td>10 s</td> <td>5 h</td> </tr> </tbody> </table> <p>Note: all waiting time indicated are valid since the surface does not contaminated from dust or weathering</p>			Substrate temperature	Minimum	Maximum	+10°C	2 h	4 h	+23°C	1 h	4 h	+30°C	1 h	4 h	Substrate temperature	Minimum	Maximum	+10°C	24 h	36 h	+23°C	12 h	36 h	+30°C	8 h	36 h	Substrate temperature	Minimum	Maximum	+10°C	10 s	7 h	+23°C	10 s	6 h	+30°C	10 s	5 h
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Applied Product Ready for Use	Gel Time ~8 sec.	Foot traffic ~15 min	Light traffic ~8 h																																				
	Curing Time ~24 h																																						
	Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.																																						

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Substrate quality

- The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².
- The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc.
- If in doubt, apply a test area first.

The substrate preparation methods strictly depend on substrate type, conditions and stress level expected. Substrates which must always be primed are:

- cementitious substrates (concrete, screeds, mortars, plasters, etc.) and bricks
- tiles (abraded)
- metal

Cementitious substrates, bricks and tiles

Cementitious substrates, bricks and tiles must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance, loose and friable material and achieve an open textured surface. Weak material must be removed and surface defects such as blowholes and voids must be fully exposed. Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor®, SikaDur® and SikaGard® range of materials. The surface has to be levelled in order to achieve an even surface without high spots. All dust, loose and friable material must be completely removed from all surfaces before application of the product by vacuum. The surface must be primed with Sika® Concrete Primer or Sika® Primer Roof EP lightly broadcast with quartz sand, 0.4-0.7 mm, before the application of Sikalastic®-832 FR I.

Metal
Metal surfaces must be prepared by blast cleaning to Sa 2 ½ (ISO 8501-1) or SSPC-SP 10. The substrate has to be free from contaminants detrimental to adhesion, preferably by high pressure water jetting prior of blast cleaning. Then, the surface must be coated with Sikalastic® Metal Primer before the application of Sikalastic®-832 FR I.

APPLICATION

Apply using a plural component, heated, high pressure, proportioning spray equipment. The proportioning equipment utilized must be capable of supplying correct pressure and heat for the appropriate hose length on a consistent basis. Both components must be heated up to +60 ÷ +80°C, both in drum and hose. The recirculation system should be activated during the preliminary drums heating.

The correct mixing ratio is: 1 : 1 by volume. The accuracy of mixing and dosage must be controlled regularly with the equipment.

Thoroughly mix Sikalastic®-832 FR I part A pigmented resin using a low speed drum mixer until a homogeneous mixture and colour is obtained.

For part B (isocyanate), it is recommended to use a suitable drier filter in order to protect this component from the humidity.

Beware: on porous substrates, in order to avoid blowholes and voids on the surface of the product, it is recommended to apply different primer layers until the surface porosity is filled. Lightly broadcast the primer with clean and dry quartz sand, 0.4 - 0.7 mm. Do not blind the primer.

Apply suitable strengthening systems to cover dynamic joints, connections and cracks. Please contact our Technical Service for more detailed information.

IMPORTANT CONSIDERATIONS

- This product may only be used by experienced professionals.
- For spray application the use of protective health & safety equipment is mandatory! See the relative Safety Data Sheet to obtain more detailed information.
- Application by using plural component, heated, high pressure, proportioning spray equipment.
- Under direct UV-exposure Sikalastic®-832 FR I will discolour and may exhibit some chalking tendencies.
- Do not apply Sikalastic®-832 FR I on FPO and PVC. Do not apply close to the air intake vent of a running air conditioning unit.
- Volatile bituminous materials may stain the coating. The use of proper primer avoids this phenomenon.

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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations

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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.

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.

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.

Sikalastic-832FRI-en-IT-(11-2019)-2-2.pdf