

Sikalastic®-841 ST

Spray applied pure Polyurea membrane

Product Description

Sikalastic®-841 ST is a two part, elastic, 100% solids, very fast curing pure polyurea spray applied membrane. Sikalastic®-841 ST is for machine application only.

Uses

■ For waterproofing and anticorrosion applications on steel, concrete and many other substrates:

Typical uses:

- Protective coatings
- Tank coatings/linings
- Bridge coatings
- Roof coatings
- Walkways and balconies
- Flooring and parking decks
- Industrial and manufacturing facilities
- Landscape and water containment
- Power plants

Characteristics / Advantages

- Fast reactivity and cure time
- Almost immediate return-to-service time
- Applicable in temperatures from -15°C to 70°C
- Performs in constant temperatures from -30°C to 120°C
- 100% solids with zero VOC
- Excellent crack-bridging properties
- UV-resistant
- Excellent corrosion protection

Test Approvals / Standards

(AS 4020:2005) Certified for use in contact with potable water

Product Data

Form

Appearance / Colours

ISO - Part A: clear liquid

Resin - Part B: grey liquid

Grey ~ RAL 7005

Packaging

Part A (net): 212 kg drum (189 liter)

Part B (net): 191 kg drum (189 liter)

Construction



Storage

Storage Conditions / Shelf Life

Part A: 18 months
Part B: 18 months

From date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C.

Technical Data

Chemical Base

Pure Polyurea

Density

Part A: ~ 1.12 kg/litre
Part B: ~ 1.01 kg/litre
All Density values at +23°C

Gel Time

6 to 20 seconds

Tack Free Time

60 to 120 seconds

Post Cure Time

24 hours

Solid Content

> 99%

Viscosity

Part A: ~ 800 mPas at 23°C
Part B: ~ 350 mPas at 23°C

Mechanical / Physical Properties

Tensile Strength

> 15 N/mm²

Shore D Hardness

~ 45 to 50

Elongation at Break

375 to 425%

Abrasion Resistance

< 15 mg (CS 17/1000/1000)

Taber Abrader Test

Resistance

Chemical Resistance

Sikalastic®-841 ST is resistant to many chemicals. Please ask for a detailed chemical resistance table.

Thermal Resistance

Exposure*	Temperature
Permanent dry heat	+120°C
Permanent wet heat	+70°C

*No simultaneous chemical and mechanical exposure.

Application Details

Consumption / Dosage

Coating System	Product	Consumption
System for concrete structures	1 x Sikafloor®-161, (Lightly broadcast with quartz sand, 0.3 - 0.8 mm)	0.35 – 0.55 kg/m ² (1.0 - 1.5 kg/m ²)
	1 x Sikalastic®-841 ST	~ 1.06 kg/m ² /mm

Lightly broadcasting provides higher adhesion values and extends the maximum waiting time of primer prior to the application of Sikalastic®-841 ST.

The performance and technical properties are not affected by UV exposure. Sikalastic®-841 ST is UV light resistant, but not colour stable under UV exposure.

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.

Substrate Quality	<p>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.</p> <p>The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc.</p> <p>If in doubt, apply a test area first.</p>
Substrate Preparation	<p>Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.</p> <p>Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed.</p> <p>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.</p> <p>The concrete or screed substrate has to be primed or levelled in order to achieve an even surface.</p> <p>High spots must be removed by e.g. grinding.</p> <p>All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.</p>
Application Conditions / Limitations	
Substrate Temperature	-15°C min. / +70°C max.
Ambient Temperature	-15°C min. / +70°C max.
Relative Air Humidity	85% RH max.
Substrate Moisture Content	<p>≤ 4 % pbw moisture content.</p> <p>Test method: Sika[®]-Tramex meter, CM - measurement or Oven-dry-method.</p> <p>No rising moisture according to ASTM (Polyethylene-sheet)</p>
Dew Point	<p>Beware of condensation!</p> <p>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.</p>
Application Instructions	
Mixing	<p>Part A : Part B = 50 : 50 (by volume)</p> <p>Dose and mix with suitable two-part hot spray equipment. Both components must be heated up to between +60°C and +70°C. The accuracy of mixing and dosage must be controlled regularly with the equipment.</p> <p>Sikalastic[®]-841 ST might not be diluted under any circumstances. Thoroughly mix Sikalastic[®]-841 ST part B resin material using a drum mixer until a homogenous mixture and colour is obtained.</p>
Application Method / Tools	<p>Prior to application, confirm substrate moisture content, RH and dew point.</p> <p><i>Primer:</i> Prime prepared concrete with Sikafloor[®]-161. Sikafloor[®]-161 should be rolled, trowelled or brushed, into the concrete surface in order to avoid the formation of pinholes. Two applications may be necessary for porous substrates.</p> <p>Lightly broadcasting with quartz sand 0.3 - 0.8 mm is recommended and helps to extend the max. waiting time prior to the application of Sikalastic[®]-841 ST. In order to avoid the formation of blisters do not broadcast to excess.</p> <p><i>Waterproofing:</i> Spray apply with suitable two-part hot spray high pressure equipment e.g. Graco Reactor E-XP2. (www.graco.com).</p> <p>The proportioning equipment utilized must be capable of supplying correct pressure and heat for the appropriate hose length on a consistent basis.</p>

Cleaning of Tools

Clean all tools and application equipment with Thinner C immediately after use. Hardened and/or cured material can only be removed mechanically

Waiting Time / Overcoating

Before applying Sikalastic®-841 ST on Sikafloor®-161 (with broadcasting) allow:

Substrate temperature	Minimum	Maximum
+10°C	24 hours	1 month ¹⁾
+20°C	20 hours	
+30°C	16 hours	

Before applying Sikalastic®-841 ST on Sikafloor®-161 (without broadcasting) allow:

Substrate temperature	Minimum	Maximum
+10°C	24 hours	2 days ¹⁾
+20°C	12 hours	1 day ¹⁾
+30°C	6 hours	1 day ¹⁾

Before applying Sikalastic®-841 ST on Sikalastic®-841 ST allow:

Substrate temperature	Minimum	Maximum
+10°C	-	6 hours ²⁾
+20°C		5 hours ²⁾
+30°C		4 hours ²⁾
+45°C		3 hours ²⁾

¹⁾ Assuming that any dirt has been carefully removed and contamination is avoided.

²⁾ If the max. waiting time is exceeded then hand abrade the entire surface using a moderate 200 to 300 grit sandpaper. Clean the grinded surface using Sika Colma Cleaner. For larger areas Sikalastic®-810 + 15% Thinner C must be applied as a bonding bridge.

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

Note: Over-coating times can be reduced by use of alternate priming systems. Contact Sika Technical Representative for further information.

Notes on Application / Limitations

This product may only be used by experienced professionals.

Application by using 2-part hot spray high pressure equipment only.

Temperature of the substrate during application and curing: min. -15°C.

The performance and technical properties of Sikalastic®-841 ST are not affected by UV exposure. Sikalastic®-841 ST is UV light resistant, but not colour stable under UV exposure.

Please note: Always apply a test area first.

Curing Details**Applied Product ready for use**

Temperature	Rain resistant after	Ready for foot ¹⁾ traffic (carefully)	Ready for traffic ²⁾
-15°C	~ 6 minutes	~ 12 minutes	~ 180 minutes
+0°C	~ 4 minutes	~ 8 minutes	~ 100 minutes
+10°C	~ 3 minutes	~ 5 minutes	~ 60 minutes
+20°C	~ 2 minutes	~ 4 minutes	~ 45 minutes
+30°C	~ 1 minute	~ 3 minutes	~ 30 minutes

Note:

¹⁾ Only for inspection or for application of the next layer.

²⁾ Only for inspection, application of the next layer Not for permanent traffic.

Times are approximate and will be affected by changing ambient conditions.

Value Base

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet 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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Product Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.



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