

# PRODUCT DATA SHEET

## Sikalastic®-831 HP

SPRAY APPLIED WATERPROOFING MEMBRANE, BASED ON POLYUREA-POLYURETHANE HYBRID RESIN



### DESCRIPTION

Sikalastic®-831 HP is a two part, elastic, 100% solids, solvent free, very fast curing, spray applied membrane based on a polyurea / polyurethane combination with good chemical resistance.

### USES

Sikalastic®-831 HP may only be used by experienced professionals.

- Basement waterproofing for buried areas
- Fresh water tanks
- Open Waste water treatment tanks
- Roof waterproofing
- Coating over Polyurethane foam

### CHARACTERISTICS / ADVANTAGES

- Very fast reactivity and curing time
- Almost immediate return-to-service time
- Odourless
- Performs in constant dry temperatures from -20°C to +100°C
- Excellent crack bridging properties
- Good chemical resistance
- Abrasion resistance
- Not stable to UV light exposure (yellowing and chalking will occur under direct UV light exposure, overcoating with suitable top coat is recommended)
- Not resistant to biogenic sulphuric acid

### APPROVALS / CERTIFICATES

- CE-marking and Declaration of Performance as Synthetic resin screed material, SR-B2,0-AR0,5-IR20 according to EN 13813:2002, based on type testing and factory production control.
- CE-marking and Declaration of Performance as Surface protection product – Coating according to EN 1504-2:2004, based on type testing and factory production control.

### PRODUCT INFORMATION

<b>Composition</b>	Polyurea / Polyurethane Hybrid
<b>Packaging</b>	Part A: 225 kg drum Part B: 220 kg drum
<b>Colour</b>	ISO - Part A: clear Resin - Part B: Beige Mix: Beige RAL 1013 (other colours available under request)
<b>Shelf life</b>	12 months from date of production
<b>Storage conditions</b>	Store properly in original, unopened and undamaged sealed packaging in dry conditions, at temperatures between +5°C and +35°C.

<b>Density</b>	Part A: ~ 1.11 kg/lit Part B: ~ 1.01 kg/lit All density values at +23°C
<b>Solid content</b>	> 99%
<b>Viscosity</b>	Part A: ~ 750 mPas at +25°C Part B: ~ 600 mPas at +25°C

## TECHNICAL INFORMATION

<b>Shore D Hardness</b>	~ 35
<b>Abrasion Resistance</b>	< 3000 mg (EN ISO 5470-1)
<b>Tensile Strength</b>	~ 15.0 N/mm <sup>2</sup>
<b>Elongation at Break</b>	~ 400%
<b>Permeability to Water Vapour</b>	Class II (EN ISO 7783-1)
<b>Reaction to Fire</b>	Class Efl (EN 13501-1)
<b>Chemical Resistance</b>	Class II (EN 13529) Sikalastic®-831 HP is resistant to many chemicals. Please consult Sika Hellas' Technical Department.
<b>Temperature Resistance</b>	Sikalastic®-831 HP performs in constant temperatures from -20°C to 100°C under dry conditions.
<b>Service Temperature</b>	-20°C to +100°C

## SYSTEMS

<b>System Structure</b>	Primer	Sikafloor®-156 / Sikafloor®-161 / Sikalastic® Primer MP / Sika® Concrete Primer (1 or 2 x)
	Levelling up	Sikagard®-161
	Bonding bridge (intermediate)	Sikalastic®-810
	Waterproofing	Sikalastic®-831 HP

\* In case of applications subjected to traffic after application, lightly broadcast with quartz sand 0.3 - 0.8 mm. In order to avoid the formation of blisters do not broadcast to excess

<b>Dry film thickness</b>	Depending on the application. Please contact Sika Hellas' Technical Department.
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## APPLICATION INFORMATION

<b>Ambient Air Temperature</b>	+5°C min. / +50°C max.
<b>Relative Air Humidity</b>	80% r.h. max.
<b>Substrate Temperature</b>	+5°C min. / +50°C max.
<b>Dew Point</b>	Beware of condensation! 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.

## Substrate Moisture Content

### Sikafloor®-156 or Sika® Concrete Primer primers:

< 4% pbw moisture content.

Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method.

No rising moisture according to ASTM (Polyethylene-sheet)

### Sikafloor®-161 primer:

< 6% pbw moisture content.

Test method: Sika®-Tramex meter

< 4% pbw moisture content

Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method.

No rising moisture according to ASTM (Polyethylene-sheet)

### Sikalastic® Primer MP

< 6% pbw moisture content.

Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method.

No rising moisture according to ASTM (Polyethylene-sheet)

## Waiting Time / Overcoating

Before applying Sikalastic®-831 HP on Sikafloor®-161 or Sikafloor®-156 allow:

Substrate temperature	Minimum	Maximum
+10°C	24 hours	48 hours <sup>1)</sup>
+20°C	12 hours	24 hours <sup>1)</sup>
+30°C	8 hours	16 hours <sup>1)</sup>
+45°C	6 hours	12 hours <sup>1)</sup>

Before applying Sikalastic®-831 HP on Sika® Concrete Primer allow:

Substrate temperature	Minimum	Maximum
+10°C	2 hours	3 hours <sup>1,2)</sup>
+20°C	30 minutes	2 hours <sup>1,2)</sup>
+30°C	30 minutes	2 hours <sup>1,2)</sup>
+45°C	10 minutes	1 hour <sup>1,2)</sup>

Before applying Sikalastic®-831 HP on Sikalastic®-831 HP allow:

Substrate temperature	Minimum	Maximum
+10°C	10 sec	3 hours <sup>3)</sup>
+20°C	10 sec	3 hours <sup>3)</sup>
+30°C	10 sec	1 hour <sup>3)</sup>
+45°C	10 sec	1 hour <sup>3)</sup>

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

2) If the max. waiting time is exceeded then Sikalastic®-810 + 15 wt.-% Thinner C must be applied as a bonding bridge.

3) If the max. waiting time is exceeded then Sikalastic®-810 must be applied diluted with max. 20% Thinner C.

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

## Applied Product Ready for Use

Temperature	Rain resistant after	Ready for foot <sup>1)</sup> traffic (carefully)	Ready for full traffic <sup>2)</sup>
+10°C	~ 2 minutes	~ 8 minutes	~ 3 hours
+20°C	~ 2 minutes	~ 5 minutes	~ 2 hours
+30°C	~ 2 minutes	~ 4 minutes	~ 2 hours
+45°C	~ 2 minutes	~ 4 minutes	~ 2 hours

Note:

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

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

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

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

The concrete substrate must be sound and of suffi-

cient compressive strength ( $\geq 25 \text{ N/mm}^2$ ) with a minimum pull off strength of  $1.5 \text{ N/mm}^2$ .

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.

In case of special substrate please contact Sika Hellas Technical Department.

All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

## MIXING

Part A : Part B = 1 : 1 (by volume)

Dose and mix with suitable two-part high or low pressure spray equipment.

Both components shall be heated up to +50 - +80°C. The accuracy of mixing and dosage must be controlled regularly with the equipment.

## APPLICATION

Prior to application, confirm substrate moisture content, r.h and dew point.

### Primer:

Prime prepared concrete with Sikafloor®-156 or Sikafloor®-161 or Sika® Concrete Primer or Sikalastic® Primer MP. Follow the directions stated on the pds of the selected primer. If necessary, apply two coats of primer. In case of applications subjected to traffic after application, lightly broadcast with quartz sand 0.3 - 0.8 mm. In order to avoid the formation of blisters do not broadcast to excess.

### Levelling up:

Rough surfaces need to be leveled first. Use Sikagard®-161 leveling mortar (see the relevant PDS) or other suitable systems.

### Waterproofing:

Spray apply Sikalastic®-831 HP with suitable two-part hot spray equipment. Possible suppliers of spray equipment are Gama, Graco, Isotherm, WiWa, Reaku,...

Material temperature: +50°C - +80°C

Indicated pressure 100 -180 bar.

For more detailed application engineering information please refer to the appropriate method statement.

### Bonding bridge (intermediate):

Uniformly spread 1 x Sikalastic®-810 using a short pile (12 mm) nylon roller or by spray.

## CLEANING OF EQUIPMENT

Removal of fresh remnants from tools and application equipment can be carried out using Thinner C immediately after use. Hardened / cured material can only be mechanically removed.

## IMPORTANT CONSIDERATIONS

- Application is by 2-part hot spray equipment only.
- Temperature of the substrate during application and curing: min. +5°C.
- Sikalastic®-831 HP is not UV light resistant, changes colour and chalks under UV exposure.
- Areas with permanent exposure to UV radiation must be covered with suitable coating, such as Sikalastic®-701 (consumption 0,25-0,30 kg/m<sup>2</sup>).
- Otherwise, other suitable coatings are Sikalastic® 621 TC (consumption ~0,25 lt/m<sup>2</sup>) or SikaCor® EG-5 (consumption 0,25 kg/m<sup>2</sup>) or Sikafloor®-359 N (consumption 0,25 kg/m<sup>2</sup>).
- For applications where protective coating is required for Sikalastic®-831 HP in cases of permanent immersion please contact our Technical Department for advice.
- Always apply a test area first.

## 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 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.

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

According to the EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / j type sb) is 550 / 500 g/l (Limits 2007 / 2010) for the ready to use product.

The maximum content of Sikalastic®-831 HP is < 500g/l VOC for the ready to use product.

## 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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