

PRODUCT DATA SHEET

Sikalastic®-859 R Ultimate

TWO-COMPONENT SPRAY APPLIED ROOF WATERPROOFING MEMBRANE

DESCRIPTION

Sikalastic®-859 R Ultimate is a two component, elastic, crackbridging, rapid-curing modified polyurethane/polyurea- hybrid membrane. Sikalastic®-859 R Ultimate is applied by two component hot spray equipment.

USES

Sikalastic®-859 R Ultimate may only be used by experienced professionals.

- For use as waterproofing membrane on new roof structures and for refurbishment of old roofs
- For use on fully exposed roofs to UV, protected by the use of a topcoat
- For use as protective coating (EN1504-2) for concrete structures on non-trafficked areas or use as a waterproofing membrane
- For other concrete structures and on non-trafficked concrete areas with an additional top coat for UV-protection.

CHARACTERISTICS / ADVANTAGES

- Friend of the environment - does not contain VOC
- No weight losses
- No secondary reaction products
- Resistant to atmospheric agents
- Low permeability values
- Application at temperatures between +5 °C and + 40 °C

APPROVALS / CERTIFICATES

CE marked according to the product standard EN 1504-2: 2004 - Products and systems for the protection and repair of concrete structures.

The product is CE marked in accordance with attestation system 4 with reference to the use of physical resistance.

PRODUCT INFORMATION

Composition	Modified Polyurethane/ Polyurea-Hybrid		
Packaging	Sikalastic®-859 R Ultimate systems are typically supplied in two components: Part A (ISO) in drums of 225 kg. Part B (RESIN) in drums of 205 kg.		
Colour	Grey		
Shelf life	12 months from date of production		
Storage conditions	The product must be stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Higher storage temperatures may reduce shelf life of product. Reference shall also be made to the storage recommendations within the safety data sheet.		
Density	Part A (ISO)	1,11 - 1,12 kg/l	UNI EN ISO 2811-1:2011
	Part B (RESIN)	1,05 – 1.10 kg/l	
	All density values at +25 °C		
Viscosity	Part A (ISO)	500 - 800 mPas	UNI EN ISO 3219:1996 Brookfield
	Part B (RESIN)	300 - 500 mPas	
	Viscosity values determined at +25°C		

TECHNICAL INFORMATION

Shore A hardness	90- 94	UNI EN ISO 868:2005
Shore D Hardness	38- 42	UNI EN ISO 868:2005
Abrasion resistance	approx. 100 mg H22 / 1000gr / 1000 rev	EN 5470-1:2001
Tensile strength	13 - 16 MPa	ISO 527-1:2012
Tensile strain at break	300- 350%	ISO 527-1:2012
Tear strength	100- 130 KN/m	UNI ISO 34-1:2010
Chemical resistance	High resistance to a wide range of chemicals. For more information contact our Technical Department.	
Service temperature	min. -30°C / max. +140°C	

SYSTEMS

System structure

Exposed Roof Waterproofing

Sikalastic®-859 R Ultimate is applied in one coat and sealed with one coat Sikalastic®-701

Layer	Product	Consumption
1. Primer	please refer to substrate pre-treatment	please refer to PDS of the primer
2. Waterproofing	Sikalastic®-859 R Ultimate	≥ 1,6 kg/m ²
3. UV Protection	Sikalastic®-701	~0,3 kg/m ²

Non-Exposed Roof Waterproofing

Sikalastic®-859 R Ultimate is applied in one coat

Layer	Product	Consumption
1. Primer	please refer to substrate pre-treatment	please refer to PDS of the primer
2. Waterproofing	Sikalastic®-859 R Ultimate	≥ 2,1 kg/m ²

Note: These figures are theoretical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastage.

Dry film thickness

Exposed Roof Waterproofing

Waterproofing	~1,6 mm
UV Protection	~0,2 - 0,5 mm
Total*	~1,8 - 2,1 mm

* depending on the top coat selection

Non-Exposed Roof Waterproofing

Waterproofing	~2,1 mm
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Mixing ratio

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

Product temperature

Part A	+60 to +80 °C
Part B	+60 to +80 °C
Hose	+60 to +80 °C

Ambient air temperature

+5 °C min. / +40 °C max.

Dew point

≥3 °C above dew point

Substrate moisture content

≤ 4 % pbw moisture content.

Test method: Sika®-Tramex meter, CM - measurement on Oven-dry method No rising moisture according to ASTM (Polyethylene-sheet).

Substrate pre-treatment

Substrate	Primer
Cementitious substrates	Sika® Concrete Primer or Sika®Primer EP-20TR lightly broadcast with quartz sand, 0,3–0,8 mm
Ceramic tiles (unglazed), and concrete slabs	Sika® Concrete Primer
Bituminous felt	Sikalastic® Metal Primer
Bituminous coatings	Sikalastic® Metal Primer
Metals	Sikalastic® Metal Primer
Ferrous or galvanised metals, lead, copper, aluminium, brass or stainless steel	

For the consumption rates and waiting time / overcoating please refer to the PDS of the appropriate primer. Other substrates must be tested for their compatibility. If in doubt, apply a test area first.

Waiting time to overcoating

Before applying Sikalastic®-859 R Ultimate on Sika®Primer EP-20TR allow:

<u>Substrate temperature</u>	<u>Minimum waiting time</u>	<u>Maximum waiting time¹</u>
+10 °C	24 hours	1 month
+20 °C	12 hours	1 month
+30 °C	8 hours	1 month
+45 °C	6 hours	1 month

Before applying Sikalastic®-859 R Ultimate on Sikalastic®-859 R Ultimate allow:

<u>Substrate temperature</u>	<u>Minimum waiting time</u>	<u>Maximum waiting time²</u>
+10 °C	5 minutes	7 hours
+20 °C	5 minutes	6 hours
+30 °C	5 minutes	5 hour
+45 °C	5 minutes	5 hour

Before applying Sikalastic®-701 on Sikalastic®-859 R Ultimate allow:

<u>Substrate temperature</u>	<u>Minimum waiting time</u>	<u>Maximum waiting time²</u>
+10 °C	1 hour	24 hours
+20 °C	1 hour	24 hours
+30 °C	1 hour	24 hours
+45 °C	1 hour	24 hours

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

² If the maximum waiting time is exceeded, Sika® Concrete Primer has to be applied with a consumption rate of 100 g/m² as an adhesion promoter between the layers.

Gel time: Approx. 5-7 sec. (+25°C)

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

Applied product ready for use

When applied correctly the Sikalastic®-859 R Ultimate:

- Develops its rain resistance in ~ 5 minutes
- Can be used for maintenance and next layer applications as stated in the "Waiting Time / Overcoating"

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

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.

FURTHER INFORMATION

- Application is by 2-part hot spray equipment only. For spray application the use of protective health and safety equipment is mandatory.
- Always refer to the manufacturer's instructions before use the tools and mixing equipment.
- Products shall only be applied in accordance with their intended use.
- Do not apply Sikalastic®-859 R Ultimate on substrates with rising moisture.
- On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperatures. If applied during rising temperatures "pin holing" may occur from rising air.
- Product shall be used in conjunction with a safe system of work. Ensure an adequate assessment of all site risks has been conducted prior to work commencing.
- Refer to the product safety datasheet for further guidance.
- Do not use Sikalastic®-859 R Ultimate for indoor ap-

plications.

- Sikalastic®-859 R Ultimate is not UV light resistant and changes colour under UV exposure. However, the performance and technical properties are not affected. Providing the exposure is max. 6 weeks further information contact with Sika Tech. Services. It is therefore advisable to overcoat Sikalastic®-859 R Ultimate with UVprotective top coat as early as possible.
- Please note: Always apply a test area first.

PRODUCT DATA SHEET

Sikalastic®-859 R Ultimate
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ECOLOGY, HEALTH AND SAFETY

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The surface must be sound, of sufficient strength, clean, dry and free of dirt, oil, grease and other contamination. Depending on the material the substrate must be primed or mechanically cleaned. Grinding may be necessary to level the surface. Suitable substrates are such as: Concrete, bituminous felts and coatings, metal, brickwork, asbestos cement, ceramic tiles.

MIXING

Dose and mix with suitable two-component spray equipment. Maintain recommended product and hose temperature.

Ensure equal pressure of part A + B. The accuracy of pressure, mixing and dosage must be controlled regularly with the equipment.

APPLICATION

Prior the application of Sikalastic®-859 R Ultimate the priming coat if used must have cured tack-free. For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer. Damageable areas (handrails etc.) have to be protected with tape or plastic wrapping.

Waterproofing:

Spray apply Sikalastic®-859 R Ultimate with suitable two-component hot spray equipment. Possible suppliers of spray equipment are Gama, Graco, Isotherm, WiWa, Reaku etc.

UV Protection:

One layer of Sikalastic®-701 applied either by roller or airless spray. For more detailed application engineering information pls. refer to the appropriate method statement.

CLEANING OF EQUIPMENT

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

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product 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.

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