

## PRODUCT DATA SHEET

# Sikalastic®-859 R ME

### TWO-COMPONENT SPRAY APPLIED ROOF WATERPROOFING MEMBRANE

#### DESCRIPTION

Sikalastic®-859 R ME is a two component, elastic, crack bridging, rapid-curing modified polyurethane/polyurea hybrid membrane. Sikalastic®-859 R ME is applied by two component hot spray equipment and cures to form a seamless surface used as waterproofing membrane for non exposed and exposed roofs to UV lights with a suitable protective topcoat .

#### USES

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

- For use as a waterproofing membrane on flat and pitched roof structures with additional top coat for UV-protection for exposed roofs.
- For use as a waterproofing membrane underneath planting or hard landscaping on podium areas.
- For use as a waterproofing membrane for other concrete structures and on non-trafficked concrete areas with an additional top coat for UV-protection.

#### FEATURES

- Total solids
- Fast application - application with 2-part hot spray equipment
- Fast curing - over coating with top coat possible after approx. 10 minutes
- Seamless waterproofing membrane
- Elastic and crack bridging
- Low viscosity
- Good adhesion to most substrates
- 12 months shelf life

#### CERTIFICATES AND TEST REPORTS

- Root resistant, test report: WD-R-230921-0915/8
- Static crack bridging ability, test report: WD-R-230921-0915/5
- Dynamic crack bridging ability, test report: WD-R-230921-0914

#### PRODUCT INFORMATION

<b>Composition</b>	Polyols, flexible amines and aromatic isocyanates	
<b>Packaging</b>	Component A (resin)	205 kg drum
	Component B (iso)	225 kg drum
	Kit A+B	430 kg
<b>Shelf life</b>	Component A	12 months from date of production
	Component B	12 months from date of production
<b>Storage conditions</b>	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.	

Colour	Component A (Resin)	Grey	
	Component B (Iso)	Clear / brownish	
Appearance and colour	Mixed product has a silk matt grey finish		
Density	Component A (Resin)	~1,12 g/cm <sup>3</sup>	(UNI EN ISO 2811-1:2011)
	Component B (Iso)	~1,10 g/cm <sup>3</sup>	
	Mixed A+B	~1,11 g/cm <sup>3</sup>	
Solid content by volume	~100 % solid content		
Viscosity	Component A (Resin)	~500 - 800 mPas	(UNI EN ISO 3219:1996)
	Component B (Iso)	~400 - 600 mPas	

## TECHNICAL INFORMATION

Shore A hardness	~95	(UNI EN ISO 868:2005)		
Shore D Hardness	~35	(UNI EN ISO 868:2005)		
Tensile strength	~10 MPa	(ISO 37:2017)		
Tensile strain at break	~300 %	(ISO 37:2017)		
Tear strength	~50 kN/m	(ISO 34-1:2000)		
Chemical resistance	<b>Test media</b>	<b>Test condition</b>	<b>Result</b>	(ISO 13529 – ASTM D543)
	Water	7d / 25°C	A	
	Methanol	7d / 25°C	B	
	Acetic Acid 10%	7d / 25°C	A	
	Phosphoric Acid 85%	7d / 25°C	A	
	Potassium Hydroxide 50%	7d / 25°C	A	
	Sodium Hypochlorite Cl <sub>2</sub> 23%	7d / 25°C	B	
	Dimethylformamide	7d / 25°C	C	

A: Excellent resistance. Possible color change, without loss of protection features.

B: Good resistance. Color change with moderate reduction of protection features.

C: Poor resistance. Color change and loss of protection features. Not recommended

NOTE: When Sikalastic®-859 R ME is used in different condition than described in the table, must be tested before use.

Resistance to UV exposure	When exposed to UV, membrane requires a protective layer, e.g Sikalastic®-701, Sikalastic®-701 SF. Contact Sika Technical Service Department for recommendation.
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## SYSTEM INFORMATION

System structure	<b>Exposed Roof Waterproofing</b>		
	Sikalastic®-859 R ME is applied in one coat and sealed with one coat Sikalastic®-701/ -701 SF		
	<b>Layer</b>	<b>Product</b>	<b>Consumption</b>
	1. Primer	please refer to substrate pre-treatment	please refer to PDS of the primer
	2. Waterproofing	Sikalastic®-859 R ME	≥ 1,6 kg/m <sup>2</sup>
	3. UV Protection	Sikalastic®-701/ -701 SF	~0,3 kg/m <sup>2</sup>

### Non-Exposed Roof Waterproofing

Sikalastic®-859 R ME is applied in one or two coats

<u>Layer</u>	<u>Product</u>	<u>Consumption</u>
1. Primer	please refer to substrate pre-treatment	please refer to PDS of the primer
2. Waterproofing	Sikalastic®-859 R ME	≥ 1,8 kg/m <sup>2</sup>

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.

<b>Dry film thickness</b>	Exposed Roof Waterproofing: ~ 1.9 mm Non Exposed Roof Waterproofing: ~ 1.7 mm
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## APPLICATION INFORMATION

<b>Mixing ratio</b>	Mixing ratio 1:1 by volume
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<b>Material temperature</b>	Component A (Resin)	~60 - 80°C
	Component B (Iso)	~60 - 80°C
	Hose	~70°C

Note: Air Pressure of the spraying equipment must be ~170 bar. Spray equipment fine temperature adjustments could be helpful to obtain equal output pressures of the 2 parts. Higher temperatures provide lower viscosity and lower pressure.

<b>Ambient air temperature</b>	+5°C min. / +50°C max.
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<b>Relative air humidity</b>	85 % max
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<b>Dew point</b>	Beware of condensation. The substrate and uncured applied membrane must be at least +3 °C above dew point.
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<b>Substrate temperature</b>	+5°C min. / +50°C max.
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<b>Substrate moisture content</b>	≤4 % parts by weight. The following test methods can be used: Sika®-Tramex meter, CM-measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet).
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<b>Substrates</b>	Suitable substrates: Concrete, bituminous felts and coatings, metal, brick masonry, asbestos cement, ceramic tiles. Note: Suitable primer selection and correct substrate preparation is important. Contact Sika Technical Service Department for recommendations.
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<b>Gel time</b>	~10 seconds at 25°C
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<b>Tack free time</b>	~10 minutes
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<b>Waiting time to overcoating</b>	Before applying Sikalastic®-859 R ME on Sikalastic®-859 R ME allow:		
	<b>Substrate Temperature</b>	<b>Minimum waiting time</b>	<b>Maximum waiting time</b>
	+10°C	~10 minutes	~ 4 hours
	+20°C	~10 minutes	~ 3 hours
	+30°C	~10 minutes	~ 2 hours
+45°C	~10 minutes	~ 1 hours	

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

<b>Substrate Temperature</b>	<b>Minimum waiting time</b>	<b>Maximum waiting time</b>
+10°C	~ 2 hours	~ 24 hours
+20°C	~ 2 hours	~ 24 hours
+30°C	~ 2 hours	~ 24 hours
+45°C	~ 2 hours	~ 24 hours

If the maximum waiting time / overcoating time is exceeded, Sika® Concrete Primer must be applied at consumption rate of 100 g/m<sup>2</sup> as an adhesion promoter between the layers. As an alternative, the membrane surface will need to provide a mechanical bond. This can be achieved by lightly abrading with mechanical abrasive equipment to remove all the surface sheen. Select the abrasive grit size and intensity of abrading depending on the condition of the membrane. Then completely remove all the dust by industrial vacuuming equipment. The final prepared surface must not have any sheen residue present.

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

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**Applied product ready for use**

Rain Resistant: ~10 minutes

Time is approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

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## 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

- Sika Method Statement: Sikalastic®-859 R ME

## IMPORTANT CONSIDERATIONS

- For spray application the use of protective health and safety equipment specialized for polyurea product is mandatory.
- Sikalastic®-859 R ME must be applied by 2-Component hot spray high pressure equipment.
- Under UV and weathering discolouration and colour variation will occur.
- Product must only be applied in accordance with their intended use.
- Do not apply on substrates with rising moisture or are unstable.
- On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperature. If applied during rising temperatures "pin holing" may occur from rising vapour. Sikalastic® range of primers may assist with reducing or eliminating this effect.
- Do not use Sikalastic®-859 R ME for indoor applications.
- Do not apply near to running air intakes of air conditioning units. Switch off units and seal intakes before applying.
- Ensure bituminous substrates are primed otherwise discolouration will occur.
- The reported data refer to the product applied in the laboratory and conditioned at an ambient temperature of 23°C with an average RH of 50% for 28 days.

## 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.

## APPLICATION INSTRUCTIONS

### EQUIPMENT

#### Mixing and spraying

- Drum stirrer
  - Air driven or electrical 2-Component heated spray equipment
- Contact Sika Technical Services for recommendation.

### SUBSTRATE PREPARATION

Refer to the Sika Method Statement: Sikalastic®-859 R ME

#### Suitable substrates

Concrete, bituminous felts and coatings, metal, brick masonry, asbestos cement, ceramic tiles.

#### General

All contamination such as dust, loose and friable material that could affect final finish or reduce adhesion, must be completely removed from all surfaces before application of the product or subsequent products, preferably by industrial vacuuming equipment.

### MIXING

Refer to the Sika Method Statement: Sikalastic®-859 R ME

## APPLICATION

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.  
Refer to the Sika Method Statement: Sikalastic®-859 R ME.

## CLEANING OF EQUIPMENT

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

## 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 Gulf B.S.C. (c)

Tel: +973 177 38188  
Email: info@bh.sika.com  
Sika Kuwait Cons. Mat. & Paints Co WLL  
Tel: +965 22 282 296  
Email: sika.kuwait@kw.sika.com  
Web: gcc.sika.com

### Sika UAE LLC

Sika MB Construction Chemicals LLC  
Sika International Chemicals LLC  
Tel: +971 4 439 8200  
Email: info@ae.sika.com  
Web: gcc.sika.com

### Sika Saudi Arabia Limited

Riyadh / Jeddah / Dammam / Rabigh  
Tel: +966 11 217 6532  
Email: info@sa.sika.com  
Web: gcc.sika.com

### Sika LLC - Oman

Master Builders Solutions LLC  
(part of Sika)  
Tel. +968 22 826 500  
Email: info@om.sika.com  
Web: gcc.sika.com



ISO 9001, 14001, 45001 – SGS  
- Sika UAE LLC  
- Sika International Chemicals LLC  
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ISO 9001, 14001 – SGS  
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ISO 9001, 14001 – TÜV  
- Sika MB Construction Chemicals LLC  
- Master Builders Solutions LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



### Product Data Sheet

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