

PRODUCT DATA SHEET

Sikalastic®-859 R ME

Two-part spray applied roof waterproofing membrane

DESCRIPTION

Sikalastic®-859 R ME is a two-part, elastic, crack bridging, rapid-curing modified polyurethane and polyurea hybrid membrane. It is applied using two-part hot spray equipment and cures to form a seamless surface. This surface serves as a waterproofing membrane for unexposed roofs and UV light-exposed roofs when paired with a suitable protective topcoat.

USES

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

Sikalastic®-859 R ME is used for:

- Flat and pitched roof structures with an additional topcoat for UV protection on exposed roofs.
- Underneath planting or hard landscaping on podium areas.
- Concrete structures and non-trafficked concrete areas with an additional topcoat for UV protection.

Please note:

- The Product may only be used by experienced professionals.
- The Product may only be used for exterior applications.

CHARACTERISTICS / ADVANTAGES

- Fast application increases productivity and saves time
- Very fast reactivity and curing time
- Applied by two-part hot spray equipment
- Good adhesion to many construction materials
- Good crack-bridging ability
- Seamless
- Low viscosity

APPROVALS / STANDARDS

- CE marking and declaration of performance based on EN 1504-2:2004 Products and systems for the protection and repair of concrete structures — Surface protection systems for concrete — Coating

PRODUCT INFORMATION

Chemical Base	Polyols, flexible amines and aromatic isocyanates	
Packaging	Drum Part A	205 kg
	Drum Part B	225 kg
	Packaging Drum Part A + Part B	430 kg
Refer to the current price list for available packaging variations.		
Colour	Part A	Grey
	Part B	Clear brownish
	Cured colour	Grey
Appearance / Colour	Mixed product has a silk matt grey finish	
Shelf Life	Part A	12 months from date of production
	Part B	12 months from date of production

Storage Conditions

The Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to the packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.

Density	Mixed Product	<u>1.11 kg/l</u>	(EN ISO 2811-1)
	Part A	<u>1.12 kg/l</u>	
	Part B	<u>1.10 kg/l</u>	
Viscosity	Part A	500-800 mPas	(EN ISO 3219)
	Part B	400-600 mPas	
Solid content by volume	100 %		

TECHNICAL INFORMATION

Shore A Hardness	Cured 14 days at +23 °C	<u>95</u>	(EN ISO 868)
Shore D Hardness	Cured 7 days at +23 °C	<u>35</u>	(EN ISO 868)
Abrasion Resistance	Cured 20 days at +23 °C	30-35 mg (H22 / 1000 g / 1000 cycles)	(EN ISO 5470-1)
Tensile Strength	Unreinforced	<u>11 MPa</u>	(EN ISO 527-3)
Elongation at Break	Cured 7 days at +23 °C	<u>300 %</u>	(EN ISO 527-3)
Tear Strength	Cured 14 days at +23 °C	<u>100 KN/m</u>	(ISO 34-1)
Chemical Resistance	Test media	Test conditions	Result
	Water	28 days at +25 °C	Very good resistance. Possible colour change, no loss of protection
	Methanol	28 days at +25 °C	Good resistance. Colour change with slight loss of protection
	Acetic Acid 10 %	28 days at +25 °C	Very good resistance. Possible colour change, no loss of protection
	Phosphoric Acid 85 %	28 days at +25 °C	Very good resistance. Possible colour change, no loss of protection
	Potassium Hydroxide 50 %	28 days at +25 °C	Very good resistance. Possible colour change, no loss of protection
	Test media	Test conditions	Result
	Sodium Hypochlorite 3 %	28 days at +25 °C	Good resistance. Colour change with slight loss of protection
	Dimethylformamide	7 days at +25 °C	Poor resistance. Unsuitable

Resistance to UV Exposure

When used exposed to UV light the Product requires a protective layer, such as Sikalastic®-701

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B (by volume)	1 : 1	
Consumption	EXPOSED ROOF WATERPROOFING		
Layer	Product	Consumption	
Primer	Refer to the section "Substrate preparation"	Refer to PDS of the respective Primer	
Waterproofing	1 x Sikalastic®-859 R ME	≥ 1.6 kg/m ²	
UV protection	1 x Sikalastic®-701	0.3 kg/m ²	
UNEXPOSED ROOF WATERPROOFING			
Layer	Product	Consumption	
Primer	Refer to the section "Substrate preparation"	Refer to PDS of the respective Primer	
Waterproofing	1–2 x Sikalastic®-859 R ME	≥ 1.8 kg/m ² in total	
Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply the Product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.			
Product Temperature	Part A resin	+60 °C to +80 °C	
	Part B isocyanate	+60 °C to +80 °C	
	Hose	+70 °C	
Air Pressure of the spraying equipment must be ~170 bar. Spray equipment fine temperature adjustments are needed to obtain equal output pressures of the 2 parts. Higher temperatures provide lower viscosity and lower pressure.			
Ambient Air Temperature	Maximum	+50 °C	
	Minimum	+5 °C	
Relative Air Humidity	Maximum	85 %	
Dew Point	Beware of condensation. Substrate temperature during application must be at least +3 °C above dew point.		
Substrate Temperature	Maximum	+50 °C	
	Minimum	+5 °C	
Substrate Moisture Content	Substrate	Test method	Moisture content
	Cementitious substrates	Calcium carbide method (CM method)	≤ 4 %
	No rising moisture (ASTM D4263, polyethylene sheet)		
Substrates	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.		
Tack Free Time	10 minutes		

Waiting Time / Overcoating

Before applying Sikalastic®-859 R ME on Sikalastic®-859 R ME allow the following waiting time:

Substrate temperature	Minimum waiting time	Maximum waiting time
+10 °C	10 minutes	4 hours
+20 °C	10 minutes	3 hours
+30 °C	10 minutes	2 hours
+45 °C	10 minutes	1 hour

Before applying Sikalastic®-701 on Sikalastic®-859 R ME allow the following waiting time:

Substrate temperature	Minimum waiting time	Maximum waiting time
+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 is exceeded, carry out the following procedure:

1. Apply Sika® Concrete Primer at a consumption rate of 100 g/m² as an adhesion promoter.
2. Alternatively, lightly abrade the surface of the Product with mechanical abrasive equipment.
3. Completely remove all dust and contamination with industrial vacuuming equipment.

The final prepared surface is clean with no surface sheen residue present.

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

Applied Product Ready for Use

Rain resistant 10 minutes

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

Gel time

10 seconds

SYSTEM INFORMATION

System Structure

EXPOSED ROOF WATERPROOFING

Layer	Product
Primer	Refer to the section "Substrate pre-treatment"
Waterproofing	1 × Sikalastic®-859 R ME
UV protection	1 × Sikalastic®-701

UNEXPOSED ROOF WATERPROOFING

Layer	Product
Primer	Refer to the section "Substrate pre-treatment"
Waterproofing	1-2 × Sikalastic®-859 R ME

Dry film thickness

Exposed roof waterproofing 1.9 mm

Non-exposed roof waterproofing 1.7 mm

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 DOCUMENTS

Refer to Sika Method Statement: Sika Method Statement 850 915 20 Sikalastic 859R ME

LIMITATIONS

- 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

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.

APPLICATION INSTRUCTIONS

EQUIPMENT

MIXING AND SPRAYING

- Drum stirrer
- Air driven or electrical two-part hot spray plural-component equipment

Contact Sika Technical Services for local equipment suppliers.

SUBSTRATE PREPARATION

Refer to the Sika Method Statement: Sika Method Statement 850 915 20 Sikalastic 859R ME

SUITABLE SUBSTRATES

- Concrete

- Bituminous felt and coatings

- Metal

- Brick masonry

- Fibre cement

- Ceramic tiles

GENERAL

1. Use industrial vacuuming equipment to remove all dust, loose and friable material that could affect the final finish or reduce adhesion.

MIXING

Refer to the Sika Method Statement: Sika Method Statement 850 915 20 Sikalastic 859R ME

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

IMPORTANT

No application on rising moisture

Do not apply on substrates with rising moisture.

IMPORTANT

Coating damage from substrate outgassing

Application on absorbent substrates which are not properly primed can lead to 'outgassing' resulting in 'pin holes' in the surface. Applying Sikalastic® Primer may assist with reducing or eliminating this effect.

IMPORTANT

Risk of fumes entering air conditioning units

Do not apply close to running air conditioning unit intake vents. Switch off units and seal intakes before applying.

Reference must be made to the Sika® Method Statement: Sika Method Statement 850 915 20 Sikalastic 859R ME

CLEANING OF TOOLS

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

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.

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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