BUILDING TRUST

PRODUCT DATA SHEET

SikaShield® W159 ED 1,5 mm

Bituminous waterproofing membrane wet applied

DESCRIPTION

SikaShield® W159 ED 1,5 mm is an adhesive bituminous waterproofing membrane wet applied to the concrete surface by the adhesive mortar SikaShield® W1. It has a thickness of 1.5 mm and is flexible at -15 °C. It is reinforced with a cross-laminated PE film, which gives high mechanical properties to the membrane. The top surface and the underside have a removable liner over the adhesive compound for an easy application.

USES

The Product is used as a waterproofing membrane for:
- Basements and other below ground structures
- Vertical reinforced concrete walls
- Single and strip foundations

The Product is used as a:
- Single layer under heavy protection
- Base sheet in multi-layer systems

Please note:
- The Product is not suitable for roofs permanently exposed to UV radiation.

CHARACTERISTICS / ADVANTAGES

- No-torch application allows for safe installation in confined spaces
- Fully bonded system ensures reliable waterproofing
- Watertight against lateral water migration
- Can be applied on wet concrete
- Fast and easy installation
- Flame-free application
- Requires minimal surface preparation
- High impact resistance

PRODUCT INFORMATION

Chemical Base	Composition	Polymer modified bitumen	
	Reinforcing material	PE (a cross-laminated Polyethylene)	
Packaging	Roll width	1.0 m	(EN 1848-1)
	Roll length	20.0 m	
	Refer to the current price list for available packaging variations.		
Shelf Life	12 months from date of production		
Storage Conditions	The Product must be stored in original unopened and undamaged packaging in dry conditions and temperatures between +5 °C and +35 °C. Store in a vertical position. Do not stack pallets of the rolls on top of each other, or under pallets of any other materials during transport or storage. Always refer to packaging.		
Appearance / Colour	Top surface	Removable foil	
	Bottom surface	Removable foil	
Effective Thickness	Effective thickness	1.5 mm ± 0.15 mm	(EN 1849-1)

TECHNICAL INFORMATION

Resistance to Static Puncture	240N ±10%	(ASTM E154)
Tensile Strength	3 N/mm² ± 10%	(ASTM D412)
Elongation	330 % ± 10 %	(ASTM D412)
Resistance to tear (nail shank)	30 N (± 10 %)	(ASTM D624)
Joint Peel Resistance	400 N/m (± 10 %) (At 23 °C)	(ASTM D1876)
Foldability at Low Temperature	Low temperature flexibility Unaffected (At -29° C)	(ASTM D1970)
Resistance to lateral water migration	70 m ± 7 m	(ASTM D5385 / D5385M)
Permeability to Water Vapour	0.008 g/m²/24hr/mm-Hg ±10%	(ASTM E96)

APPLICATION INFORMATION

Ambient Air Temperature	Minimum	+5 °C
	Maximum	+50 °C
Relative Air Humidity	Maximum	80 %
Substrate Temperature	Minimum	+5 °C
	Maximum	+50 °C

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.

ECOLOGY, HEALTH AND SAFETY

We follow PLC -Priority Chemical List and PICCS- Philippine Inventory of Chemicals and Chemical Substances but we don't indicate on our local PDS.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

SYSTEM DESIGN
Consider the following when designing the system:
- The supporting structure must be of sufficient structural strength to support all new and existing layers of the system build-up.
- If used as a roof system, the complete system must be designed to withstand and be secured against wind uplift loadings.

SUBSTRATE CONDITION
The membrane is applied directly onto the adhesive mortar SikaShield® W1. Refer to the PDS of that product for information on substrate condition requirements.

APPLICATION

IMPORTANT
Unrolling at low temperatures
At low temperatures, the membrane becomes less flexible.
1. Be careful when unrolling to avoid damaging the membrane.

IMPORTANT
Damage through footwear
Footwear with spikes or sharp protrusions may puncture the membrane.
1. Use footwear with a flat profile when walking over the membrane.

IMPORTANT
Application at less than +5 °C
When applying the membranes at temperatures lower than +5 °C, use heating equipment to ensure that the substrate temperature is within the given temperature range.
Seasonal symbol
Note: If a seasonal symbol is printed on the roll's label, it is advisable to use the membrane during the indicated season.
Tackiness at high temperatures
Note: When laying the membrane at high temperatures, the integral adhesive will become 'tacky' and may restrict laying operations.
ALIGNMENT
IMPORTANT
Avoid coinciding joints
To avoid coinciding joints, lay the membranes parallel to one another. When applying on another bituminous membrane, make sure to straddle the overlaps of the previous layer.

1. Unroll the membrane.
2. Align the membrane.
3. Re-roll the membrane before application.

WET APPLICATION

Preconditions

Before the application of the adhesive mortar, the concrete substrate has been saturated with water. The adhesive mortar SikaShield® W1 has been applied onto the substrate and is still wet.

1. Lay the membrane directly over the wet adhesive mortar.
2. At one end of the membrane, peel away part of the release liner from the membrane's underside.
3. Bond this end of the membrane to the adhesive and the substrate.
4. Continue to peel away the release liner sideways from the rest of the membrane's underside.
5. Bond the rest of the membrane to the adhesive and the substrate.
6. IMPORTANT If the ambient temperature is below +10 °C, seal the membrane overlaps by heating them with a gas torch or with hot air.Seal the membrane overlaps to avoid trapping the adhesive under the overlap, which can compromise the adhesion.
7. Roll the surface of the applied membrane with a roller from the centre to the edge to remove any air bubbles.
8. Push any excess of adhesive towards the opposite direction of the sealed side overlap.
9. Allow the adhesive mortar to cure for at least 24 hours at +25 °C before you start backfilling.

DETAILING

1. Use a sharp knife to cut in all details such as internal and external corners, upstands, vent pipes, drains, support metalwork etc.

Refer to the relevant method statement for further information on detailing.

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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