BUILDING TRUST

PRODUCT DATA SHEET

SikaShield® HB79 MGF 4 mm

160 mil hybrid (SBS/APAO) bituminous cap sheet, cold/mop-applied

PRODUCT DESCRIPTION

SikaShield® HB79 MGF 4 mm is a 2-in-1 modified bituminous roofing membrane with a thickness of 160 mil. The upper layer is APAO-modified (an APP polymer type), which provides excellent heat resistance and durability, while the under layer is SBS-modified, enhancing elongation, elasticity, and cold flexibility. It is reinforced with a dimensionally stable composite inlay of a fiberglass mat compressed between two layers of non-woven spunbond polyester fabric and remains flexible at -13°F (-25°C). The top surface is coated with mineral granules, which allows permanent exposure to UV radiation.

USES

The Product is used as a roof membrane for:
- Flat or sloped roofs with up to 15% gradient
- Balconies and terraces

CHARACTERISTICS / ADVANTAGES

- Combines the advantages of APAO and SBS bitumen
- High durability
- Thicker membrane
- Highly flexible at low temperatures
- High heat resistance
- High impact and shear resistance
- Excellent fatigue strength
- Can be installed by torch, mop, cold adhesion or mechanical fixation
- Fully bonded
- Can be coated immediately after application
- Tiles can be placed directly onto the membrane

APPROVALS / STANDARDS

- Meets or exceeds the ASTM D6163, Type I, Grade G
- Underwriters Laboratory (UL)
- FM Global
- CRRC
- SikaShield® Pure-Air is certified according to the Photocatalytic Performance ISO 22197-1, D-tox, Nr. 25062020

PRODUCT INFORMATION

Chemical Base	Top Layer	APAO modified bitumen	
	Bottom layer	SBS modified bitumen	
Reinforcing Material	Composite inlay of a fiberglass mat compressed between two layers of non-woven spunbond polyester fabric		
Packaging	Roll width	39.4" (1.0 m)	(ASTM D5147)
	Roll length	32.8 ft (10 m)	
Shelf Life	36 months from the date of production		
Storage Conditions	The Product must be stored in original unopened and undamaged packaging in dry conditions and temperatures between 55°F (12°C) and 80°F (26°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.		
Top surface	Mineral Granules: ▪ Regular and Bright White ▪ Pure-Air (Smog Reduction) ▪ Other colors: grey, green, black, red, blue		
Bottom Surface	Non-woven polypropylene fabric		
Effective Thickness	160 mil (4.0 mm) on the selvage edge		(ASTM D5147)
Weight	126 pounds per roll		

TECHNICAL INFORMATION

Hail Resistance	Pass class SH		(FM Global)
Tensile Strength	**At 23 °C, before heat:**		(ASTM D5147)
	Longitudinal (MD)	81.1 lbf/in	
	Transversal (CMD)	73.2 lbf/in	
	At -18 °C, before heat:		(ASTM D5147)
	Longitudinal (MD)	117 lbf/in	
	Transversal (CMD)	87.2 lbf/in	
Elongation	**At 23 °C, before heat:**		(ASTM D5147)
	Longitudinal (MD)	53.4%	
	Transversal (CMD)	58.1%	
	At -18 °C, before heat:		(ASTM D5147)
	Longitudinal (MD)	18.7%	
	Transversal (CMD)	19.9%	
Dimensional Stability	Longitudinal (MD)	0.0 %	(ASTM D5147)
	Transversal (CMD)	0.1 %	
Tear Strength	Longitudinal (MD)	149 lbf	(ASTM D5147)
	Transversal (CMD)	119 lbf	
Joint Shear Resistance	Longitudinal (MD)	74.23 lbf/in (650 N/50 mm)	(EN 12317-1)
	Transversal (CMD)	68.21 lbf/in (550 N/50 mm)	

External Fire Performance	Class A		(UL 790)
Behavior after Artificial Weathering	Flexibility at low temperature after heat conditioned at 70 °C:	-13 °F (-25 °C)	(ASTM D5147)
Solar Reflectance	Initial 0.68	3-year 0.61	(ASTM E1980-11)
Thermal Emittance	Initial 0.89	3-year 0.89	(ASTM E1980-11)
Solar Reflectance Index	Initial 82	3-year 73	(ASTM E1980-11)
Durability	Loss of granules	0.1 gr	(ASTM D5147)
Low Temperature Bend	-13 °F (-25 °C)		(ASTM D5147)

APPLICATION INFORMATION

Ambient Air Temperature	Minimum	41°F (5°C)
	Maximum	104°F (40°C)
Relative Air Humidity	Maximum 80%	

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

AVAILABILITY/WARRANTY

AVAILABILITY

From Sika Corporation – Roofing Authorized Applicators when used within SikaShield systems.

WARRANTY

Upon successful completion of the installed roof by the Sika Authorized Applicator in compliance with Sika requirements, Sika Corporation will provide a warranty to the Building Owner via the Sika Authorized Applicator.

LIMITATIONS

- At low temperatures, the membrane becomes less flexible. Be careful when unrolling to avoid damaging the membrane.
- Footwear with spikes or sharp protrusions may puncture the membrane. Use footwear with a flat profile when walking over the membrane.
- The reinforcement melts at 500°F (260°C). If it is damaged through overheating, the membrane becomes unusable. Keep moving the flame while torching to avoid overheating the membrane.
- Make sure to heat the membrane sufficiently. If it is not sufficiently heated, the adhesion to the substrate, between layers or on the overlaps will be reduced. If the membrane does not adhere to other elements, lift and re-torch the unbonded areas.
- When applying the membranes at temperatures lower than 41°F (5°C), use heating equipment to ensure that the substrate temperature is within the given temperature range.
- For slopes with an inclination greater than 15%, multi-layered roofs must be carefully designed and, if necessary, integrated with mechanical fastenings or termination bars.
- If a seasonal symbol is printed on the roll's label, it is advisable to use the membrane during the indicated season.
- When applying the membrane at high temperatures, the bituminous compound will become 'tacky' and may restrict laying operations.

ENVIRONMENTAL, HEALTH AND SAFETY

REGULATION (EC) NO 1907/2006 - REACH

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

- 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.
- The substrate surface must be uniform, firm, smooth and free of any sharp protrusion or burs, clean, dry, free of grease, laitance, oil, dust and loosely adhering particles.

APPLICATION

To avoid coinciding joints, lay the membranes parallel to one another, align it properly, ensure the specified overlaps are followed, and then re-roll it before application.

MEMBRANE OVERLAPS

- Overlap the membranes by a minimum of 4" (100 mm) on the sides and 6" (150 mm) on each end.
- At the end overlap, cut off a corner measuring 4" (100 mm) per side at an angle of 45°.
- End laps must be staggered 18'' (46 cm) apart.
- Offset cap sheet side and end laps so they are positioned at least 12'' (28 cm) away from any base ply laps.
- A mininum 20 lb (9 kg) roller must be used on all sides and end laps, following immediately behind the heat welding. Apply uniform pressure across the lap area while the bituminous compound is warm to ensure a positive bond.
- A continuous bead of asphalt approximately 1/4 inch wide should be visible at all laps after application.
- The edge of the seam must be left untooled (not buttered).

IMPORTANT: DO NOT STACK LAPS!

COLD-ADHESIVE BONDING

1. Apply the recommended adhesive at the required consumption onto the surface.
2. Apply the membrane onto the adhesive while still fresh. It cannot be cured.
3. Roll the surface of the applied membrane with a roller from the center to the edge to remove any air bubbles.
4. Seal the overlaps by torching or welding.

Suitable substrates for cold adhesion

- Concrete
- Lightweight concrete
- Wood
- Metal
- Cementitious screed
- Perlite screed
- Bituminous membranes with a smooth surface
- Fiber glass
- Polyisocyanurate insulation
- Polystyrene (EPS, XPS)
- Gypsum cover board
- High density ISO cover board

HOT-APPLIED BONDING (MOPPING)

Apply the hot melt at the required consumption onto the surface. Refer to the individual Product Data Sheet of the asphalt.

1. Apply the membrane onto the asphalt while still hot.
2. Roll the surface of the applied membrane with a roller from the center to the edge to remove any air bubbles.
3. Seal the overlaps with asphalt.

Suitable substrates for mopping

- Concrete
- Gypsum cover board
- Bituminous membranes with a smooth surface
- Coatings (check the compatibility)
- Brick masonry
- Cementitious screeds

NOTE: This membrane is compatible with different asphalt types.
Contact Sika® Technical Services for information on choosing the right one for your project.

WALKWAY

Install the SikaShield walkway over high-traffic areas to protect the membrane from damage, granule loss, and accelerated deterioration.

DETAILING

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.

MAINTENANCE

Standard maintenance of SikaShield system should include regular inspections of flashings, drains and terminations sealants at least twice a year and after each storm.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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