

PRODUCT DATA SHEET

Sarnafil® G 410-48 EnergySmart

48 mil thick PVC thermoplastic membrane

PRODUCT DESCRIPTION

Sarnafil® G 410-48 EnergySmart Roof Membrane is a PVC thermoplastic membrane produced with an integral fiberglass mat reinforcement for excellent dimensional stability, is highly reflective, with heat-weldable seams, and a unique lacquer coating applied to the top of the membrane to reduce dirt pick up.

USES

Used in adhered applications with various adhesives over various substrates.

AREAS OF APPLICATION

- New Roofs
- Reroofs
- Recovers
- Flashings

CHARACTERISTICS / ADVANTAGES



- Highly reflective
- Excellent dimensional stability
- Factory applied lacquer coated to reduce dirt pick up
- Hot-air welded seams for long-term performance
- Proven membrane performance
- Superior fire resistance

APPROVALS / STANDARDS

- FM Global
- Underwriters Laboratories
- Underwriters Laboratories of Canada
- ICC Code Compliance – ESR 1157
- Miami-Dade County
- Florida Building Code
- NSF/ANSI 347: Platinum Certified
- California Title 24
- LEED / Green Globes

PRODUCT INFORMATION

Chemical Base	High-quality, PVC membrane containing ultraviolet light stabilizers, flame retardant, and fiberglass reinforcement with a unique lacquer coating on the top surface.	
Recycled Content	9% Pre-consumer, 1% Post-consumer	
Reinforcing Material	Fiberglass	
Packaging	<p>48 mil (1.2 mm) Membrane (White, Reflective Gray, and Tan)* 10 ft x 150 ft (3 m x 45 m) roll, 464 lbs (211 kg) per roll, 8 rolls per pallet 5 ft x 150 ft (1.5 m x 45 m) roll, 232 lbs (105 kg) per roll, 12 rolls per pallet</p> <p>48 mil (1.2 mm) Membrane (Patina Green)* 6.56 ft x 65.6 ft (2 m x 20 m) roll, 133 lbs (60 kg) per roll, 19 rolls per pallet 3.25 ft x 65.6 ft (1 m x 20 m) roll, 63 lbs (29 kg) per roll, 20 rolls per pallet</p> <p><small>* Made to order, minimum volume required, extended production lead times. Consult with Sika – Roofing representative for further information.</small></p>	
Shelf Life	N/A	
Storage Conditions	Store rolls on pallets and fully protected from the weather with clean canvas tarpaulins. Unvented polyethylene tarpaulins are not accepted due to the accumulation of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.	
Appearance / Color	<ul style="list-style-type: none"> ▪ Top: White, Reflective Gray, Tan, and Patina Green ▪ Bottom: Gray 	
Overall Thickness	48 mil (minimum thickness) 45 mil	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
Thickness Above Scrim	22 mil 16 mil	(ASTM D-7635) (ASTM Type II D-4434 Spec. Requirement)

TECHNICAL INFORMATION

Resistance to Static Puncture	Pass 33 lbf (15 kg)	(ASTM D-5602) (ASTM Type II D-4434 Spec. Requirement)
Resistance to Dynamic Puncture	Pass 7.3 ft-lbf (10 J)	(ASTM D-5635) (ASTM Type II D-4434 Spec. Requirement)
Tensile Strength	60 lbf (267 N) 55 lbf (245 N)	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
Elongation at Break	250 & 220% MD & CMD ¹ 250 & 220% MD & CMD ¹	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
	<small>¹ MD = Machine Direction, CMD = Cross Machine Direction.</small>	
Tear Strength	15 lbf (67 N) 10 lbf (45 N)	(ASTM D-1004) (ASTM Type II D-4434 Spec. Requirement)
Seam Strength	Pass 75% of original ²	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
	<small>² Failure occurs through membrane rupture not seam failure.</small>	

Linear Dimensional Change -0.02% (ASTM D-1204)
0.1% (ASTM Type II D-4434 Spec. Requirement)

Solar Reflectance	EnergySmart Colors	Initial Solar Reflectance¹	3-Year Solar Reflectance¹
	EnergySmart White ²	0.85	0.74
	EnergySmart Tan ²	0.73	0.65
	EnergySmart Reflective Gray ²	0.73	0.66
	EnergySmart Patina Green ³	0.55	0.46

¹ Solar Reflectance testing according to ASTM C1549.

² Meets LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

³ Meets LEED, Green Globes, and California's Title 24 criteria for Steep Slope applications.

Solar Reflectance Index	EnergySmart Colors	Initial Solar Reflectance Index¹	3-Year Solar Reflectance Index¹
	EnergySmart White ²	107	90
	EnergySmart Tan ²	89	78
	EnergySmart Reflective Gray ²	90	80
	EnergySmart Patina Green ³	64	51

¹ Solar Reflectance Index calculated according to ASTM E1980.

² Meets LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

³ Meets LEED, Green Globes, and California's Title 24 criteria for Steep Slope applications.

Thermal Emittance	EnergySmart Colors	Initial Thermal Emittance¹	3-Year Thermal Emittance¹
	EnergySmart White ²	0.86	0.84
	EnergySmart Tan ²	0.85	0.86
	EnergySmart Reflective Gray ²	0.89	0.88
	EnergySmart Patina Green ³	0.86	0.85

¹ Thermal Emittance testing according to ASTM C1371, Slide Method.

² Meets LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

³ Meets LEED, Green Globes, and California's Title 24 criteria for Steep Slope applications.

Low Temperature Bend Pass (ASTM D-2136)
Pass -40°F (-40°C) (ASTM Type II D-4434 Spec. Requirement)

Weight Change after Immersion in Water 2.4% (ASTM D-570)
± 3.0% (ASTM Type II D-4434 Spec. Requirement)

UV Exposure 10,000 hours (ASTM G-154)
5,000 hours (ASTM Type II D-4434 Spec. Requirement)



Cracking (7x magnification)	None
Discoloration (by observation)	Negligible
Crazing (7x magnification)	None

Retention of Properties after Heat Ageing	Tensile Strength, % of original: Pass	(ASTM D-3045)
	Elongation, % of original: Pass	(ASTM D-751)
	Tensile Strength, % of original: 90	(ASTM Type II D-4434 Spec. Requirement)
	Elongation, % of original: 90	

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 for use within Sarnafil or Sikaplan 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.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

APPLICATION

Sarnafil G 410 is installed after proper preparation of the approved substrate. The membrane is unrolled into Sarnacol® adhesive in accordance with Sika’s technical requirements and then pressed into place with a minimum 75 lb (34 kg) steel roller. Sarnafil G 410 seams are heat-welded together by trained operators using hot-air welding equipment. Different Sarnacol adhesives require different application methods. Please consult Sika’s Specifications or Applicator Handbook for detailed installation procedures.

MAINTENANCE

Standard maintenance of Sarnafil systems should include regular inspections of flashings, drains, and termination 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**

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