



PRODUCT DATA SHEET

Sarnafil® G 410-80 EnergySmart

80 mil thick PVC thermoplastic membrane

PRODUCT DESCRIPTION

Sarnafil® G 410-80 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.

WHERE TO USE

Used in adhered applications with various adhesives over various substrates.

AREAS OF APPLICATION

- New Roofs
- Reroofs
- Recovers

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 / CERTIFICATES

- 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
- CSA-A123.21

PRODUCT INFORMATION

Composition / Manufacturing	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>80 mil (2.0 mm) Membrane (White, Reflective Gray, and Tan) 10 ft x 100 ft (3 m x 30 m) roll, 520 lbs (236 kg) per roll, 4 rolls per pallet 5 ft x 100 ft (1.5 m x 30 m) roll, 260 lbs (118 kg) per roll, 9 rolls per pallet</p> <p>80 mil (2.0 mm) Membrane (Patina Green) 6.56 ft x 49.2 ft (2 m x 15 m) roll, 175 lbs (79 kg) per roll, 19 rolls per pallet</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 / Colour	<ul style="list-style-type: none"> ▪ Top: White, Reflective Gray, Tan, and Patina Green ▪ Bottom: Gray 	
Overall Thickness	80 mil (minimum thickness) 45 mil	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
Thickness Above Scrim	40 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	110 lbf (489 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)
¹ MD = Machine Direction, CMD = Cross Machine Direction.		
Tear Strength	22 lbf (98 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)
² Failure occurs through membrane rupture not seam failure.		
Linear Dimensional Change	-0.01% 0.1%	(ASTM D-1204) (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 Flexibility

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

Weight Change after Immersion in Water

1.7%	(ASTM D-570)
± 3.0%	(ASTM Type II D-4434 Spec. Requirement)

Resistance to 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
Elongation, % of original: Pass
Tensile Strength, % of original: 90
Elongation, % of original: 90

(ASTM D-3045)
(ASTM D-751)
(ASTM Type II D-4434 Spec. Requirement)

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

FURTHER INFORMATION

AVAILABILITY

Sarnafil® G 410-80 EnergySmart is available directly from Sika Canada Authorized Applicators when used within a Sika® Sarnafil® Roofing or Waterproofing System. Contact Sika Canada or visit our website at www.sika.ca for further information.

WARRANTY

Upon successful completion of the installed roof by the Sika Canada Authorized Applicator, Sika Canada can provide a warranty to the Building Owner via the Authorized Applicator.

LIMITATIONS

The Ambient Air Temperature -20°C (-4°F) min. / +60°C (140°F) max. during application.

The Substrate Temperature -30°C (-22°F) min. / +60°C (140°F) max. during application.

Not to be applied directly to polystyrene products. Sarnafil/Sikaplan membranes are incompatible with asphalt, coal tar, heavy oils, roofing cements, creosote and some preservative materials.

ENVIRONMENT, HEALTH & 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.

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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 and Sikaplan systems should include regular inspections of flashings, drains, and termination sealants at least twice a year and after each storm.

LOCAL RESTRICTIONS

§v(02-Local-Restrictions

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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Product Data Sheet

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