

PRODUCT DATA SHEET

Sarnafil® G 410-60 SA EnergySmart

60 mil thick PVC thermoplastic membrane with adhesive backing

PRODUCT DESCRIPTION

Sarnafil® G 410-60 SA EnergySmart Roof Membrane is a PVC thermoplastic membrane with a factory applied pressure-sensitive adhesive backing and siliconized polyethylene release liner. It is 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 systems for new roofs, reroofs, and all systems for flashings.

AREAS OF APPLICATION

- Sika Approved Insulations and Cover Boards
- Polyisocyanurate Insulations
 - High Density Polyisocyanurate Roof Boards
 - Gypsum Boards with Primed Facer
 - Plywood

CHARACTERISTICS / ADVANTAGES



- Highly reflective
- VOC free and odor free
- Factory applied adhesive to reduce on-site installation labor and ensure uniform adhesive application
- Low temperature application limit of 20°F (-7°C)
- Excellent dimensional stability
- Factory applied lacquer coating to reduce dirt pick up
- Proven membrane performance
- Heat welded seams
- Superior fire resistance

APPROVALS / STANDARDS

- FM Global
- Underwriters Laboratories
- Underwriters Laboratories of Canada
- ICC Code Compliance – ESR 1157
- 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, fiberglass reinforcement, with a unique lacquer coating on the top surface and pressure-sensitive adhesive with a removable siliconized polyethylene release liner on the back surface.	
Reinforcing Material	Fiberglass	
Packaging	60 mil (1.5 mm) Membrane 6.56 ft x 90 ft (2 m x 27 m) roll, 252 lbs (114 kg) per roll 15 rolls per pallet	
Shelf Life	Sarnafil G 410 SA has a shelf life of up to 12 months. An extension may be offered, when properly stored between 60°F (16°C) and 80°F (27°C), and out of direct sunlight upon technical review.	
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	▪ Top: White, Reflective Gray, Tan, and Patina Green ▪ Bottom: Gray ▪ Pressure Sensitive Adhesive: Clear	
Overall Thickness	60 mil (1.5 mm), minimum thickness 45 mil	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
Thickness Above Scrim	27 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	80 lbf/in (356 N) 55 lbf/in (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 ¹ MD = Machine Direction, CMD = Cross Machine Direction.	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
Tear Strength	17.5 lbf (78 N) 10 lbf (45 N)	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
Seam Strength	Pass 75% of original ¹ ¹ Failure occurs through membrane rupture not seam failure.	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
Linear Dimensional Change	-0.02% 0.1%	(ASTM D-1204) (ASTM Type II D-4434 Spec. Requirement)

Solar Reflectance

EnergySmart Colors	Initial Solar Reflectance ¹	3-Year Solar Reflectance ¹
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 Index ¹	3-Year Solar Reflectance Index ¹
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 Emittance ¹	3-Year Thermal Emittance ¹
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

1.9%	(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

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.

LIMITATIONS

- The ambient and substrate temperature must be 20°F (-7°C) or above during application.
- Not to be applied directly to concrete decks, lightweight insulated concrete decks, gypsum decks or polystyrene products.
- Sarnafil membranes are incompatible with asphalt, coal tar, heavy oils, roofing cements, creosote and some preservative materials.
- A static electric charge may develop when removing the release liner from the pressure-sensitive adhesive on the back of the membrane. Care should be used when removing and handling the release liner to avoid ignition. Lids must be closed on any flammable products and a fire extinguisher should be readily available.

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 410-60 SA EnergySmart is installed after proper preparation of the approved substrate. The membrane is unrolled and positioned in place with the selvage edge lapping the adjacent roll to allow for the 3" (76 mm) side lap. Fold back half of the sheet onto itself in the long direction and carefully cut the release liner with the cutting tool provided by Sika without damaging the membrane. Peel back 3 - 5" (76 - 127 mm) of the release liner and press firmly onto the substrate. Weight may be necessary on the membrane when first starting. Continue removing the release liner from the membrane in a smooth, wrinkle-free manner while maintaining the 3" (76 mm) side lap. Immediately roll the membrane with a minimum 75 lb (34 kg) steel roller. Remove the remaining release liner from the other half of the membrane using the above process and immediately roll the membrane with the steel roller. Sarnafil® G 410-60 SA EnergySmart side lap seams are heat-welded together by trained operators using hot-air welding equipment. End laps and all cut edges are butted together and an 8" (203 mm) Sarnafil G 410 coverstrip is hot-air welded over the butt and cut edge joints. Refer to the Sarnafil G 410 SA Flashing Membrane product data sheet when using Sarnafil G 410 SA membrane for flashing use.

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.

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.

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Product Data Sheet

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