

PRODUCT DATA SHEET

Sarnafil® G 410-80 SA EnergySmart

80 mil thick PVC thermoplastic membrane with adhesive backing

PRODUCT DESCRIPTION

Sarnafil® G 410-80 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 and reroofs.

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	80 mil (2.0 mm) Membrane 6.56 ft x 65.6 ft (2 m x 20 m) roll, 243 lbs (110 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	<ul style="list-style-type: none">▪ Top: White, Tan, and Reflective Gray▪ Bottom: Gray▪ Pressure Sensitive Adhesive: Clear	
Overall Thickness	80 mil (2.0 mm), 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/in (489 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	(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-751) (ASTM Type II D-4434 Spec. Requirement)
Seam Strength	Pass 75% of original ¹	(ASTM D-751) (ASTM Type II D-4434 Spec. Requirement)
	¹ 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 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

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.

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

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.

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

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.

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

1.7%	(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

temperature, application methods, test methods, actual site conditions and curing conditions.

Results may differ based upon statistical variations depending upon mixing methods and equipment,

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 410-80 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 410-80 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.

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

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Product Data Sheet
Sarnafil® G 410-80 SA EnergySmart
May 2023, Version 09.01
020905052200203002

SarnafilG410-80SAEnergySmart-en-US-(05-2023)-9-1.pdf

