BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

# Sarnafil® G 410-80 SA EnergySmart

2 MM 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.

## WHERE TO USE

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 -7 °C (20 °F)
- Excellent dimensional stability
- Factory applied lacquer coating to reduce dirt pick up
- Proven membrane performance
- Heat welded seams
- Superior fire resistance

## APPROVALS / CERTIFICATES

- FM Global
- Underwriters Laboratories
- Underwriters Laboratories of Canada
- ICC Code Compliance – ESR 1157
- NSF/ANSI 347: Platinum Certified
- ENERGY STAR®
- California Title 24
- LEED / Green Globes
- CSA-A123.21

## PRODUCT INFORMATION

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|---|---|---|
| **Composition / Manufacturing** | 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** | Fibreglass | |
| **Packaging** | **2.0 mm (80 mil) Membrane**<br>2 m x 20 m (6.56 ft x 65.6 ft) roll, 110 kg (243 lbs) per roll<br>15 rolls per pallet | |
| **Appearance / Colour** | ▪ Top: White<br>▪ Bottom: Grey<br>▪ Pressure Sensitive Adhesive: Clear | |
| **Shelf Life** | Sarnafil® G 410-80 SA EnergySmart 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. | |
| **Overall Thickness** | 2.0 mm (80 mil), minimum thickness<br>1.1 mm (45 mil) | (ASTM D-751)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Thickness Above Scrim** | 1 mm (40 mil)<br>0.4 mm (16 mil) | (ASTM D-7635)<br>(ASTM Type II D-4434 Spec. Requirement) |

## TECHNICAL INFORMATION

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| **Resistance to Static Puncture** | Pass<br>15 kg (33 lbf) | (ASTM D-5602)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Resistance to Dynamic Puncture** | Pass<br>10 J (7.3 ft-lbf) | (ASTM D-5635)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Tensile Strength** | 489 N (110 lbf/in)<br>245 N (55 lbf/in) | (ASTM D-751)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Elongation at Break** | 250 & 220% MD & CMD[1]<br>250 & 220% MD & CMD[1]<br>[1] MD = Machine Direction, CMD = Cross Machine Direction | (ASTM D-751)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Linear Dimensional Change** | -0.01%<br>0.1% | (ASTM D-1204)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Tear Strength** | 98 N (22 lbf)<br>45 N (10 lbf) | (ASTM D-751)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Seam Strength** | Pass<br>75% of original[1]<br>[1] Failure occurs through membrane rupture not seam failure. | (ASTM D-751)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Low Temperature Flexibility** | Pass<br>Pass -40 °C (-40 °F) | (ASTM D-2136)<br>(ASTM Type II D-4434 Spec. Requirement) |

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| **Retention of Properties after Heat Ageing** | Tensile Strength, % of original: Pass<br>Elongation, % of original: Pass<br>Tensile Strength, % of original: 90<br>Elongation, % of original: 90 | (ASTM D-3045)<br>(ASTM D-751)<br>(ASTM Type II D-4434 Spec. Requirement) |
| **Resistance to UV Exposure** | 10,000 hours<br>5,000 hours | (ASTM G-154)<br>(ASTM Type II D-4434 Spec. Requirement) |

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| Cracking (7x magnification) | None |
| Discolouration (by observation) | Negligible |
| Crazing (7x magnification) | None |

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| **Weight Change after Immersion in Water** | 1.7%<br>± 3.0% | (ASTM D-570)<br>(ASTM Type II D-4434 Spec. Requirement) |

**Solar Reflectance**

| EnergySmart Colours | Initial Solar Reflectance[1] | 3-Year Solar Reflectance[1] |
|---|---|---|
| EnergySmart White[2] | 0.85 | 0.74 |

[1] Solar Reflectance testing according to ASTM C1549.
[2] Meets ENERGY STAR®, LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

**Thermal Emittance**

| EnergySmart Colours | Initial Thermal Emittance[1] | 3-Year Thermal Emittance[1] |
|---|---|---|
| EnergySmart White[2] | 0.86 | 0.84 |

[1] Thermal Emittance testing according to ASTM C1371, Slide Method.
[2] Meets ENERGY STAR®, LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

**Solar Reflectance Index**

| EnergySmart Colours | Initial Solar Reflectance Index[1] | 3-Year Solar Reflectance Index[1] |
|---|---|---|
| EnergySmart White[2] | 107 | 90 |

[1] Solar Reflectance Index calculated according to ASTM E1980.
[2] Meets ENERGY STAR®, LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

## 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.

## OTHER DOCUMENTS

### Availability

Sarnafil® G 410-80 SA EnergySmartis 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 and substrate temperature must be -7 °C (20 °F) 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.

## 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.

## 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 76 mm (3") 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 76 mm- 127 mm (3 "- 5") 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 76 mm (3") side lap. Immediately roll the membrane with a minimum 45 kg (100 lb) 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 203 mm (8") Sarnafil® G 410 coverstrip is hot-air welded over the butt and cut edge joints.

## 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.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## 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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