

## PRODUCT DATA SHEET

# Sarnafil® S 327-48 EnergySmart

48 mil thick PVC thermoplastic membrane

### PRODUCT DESCRIPTION

Sarnafil® S 327-48 EnergySmart Roof Membrane is a PVC thermoplastic membrane produced with an integral polyester reinforcement for high strength, 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 mechanically attached applications with various fastening methods, over various substrates. It can also be used in adhered applications to approved substrates.

### AREAS OF APPLICATION

- New Roofs
- Reroofs
- Recovers

### CHARACTERISTICS / ADVANTAGES



- Highly reflective
- Excellent tear strength resistance
- 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

<b>Chemical Base</b>	High-quality, PVC membrane containing ultraviolet light stabilizers, flame retardant and polyester scrim reinforcement with a unique lacquer coating on the top surface.
<b>Recycled Content</b>	9% Pre-consumer, 1% Post-consumer
<b>Reinforcing Material</b>	Polyester
<b>Packaging</b>	<b>48 mil (1.2 mm) Membrane*</b> 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  <small>* Made to order, minimum volume required, extended production lead times. Consult with Sika – Roofing representative for further information.</small>
<b>Shelf Life</b>	N/A
<b>Storage Conditions</b>	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.
<b>Appearance / Color</b>	<ul style="list-style-type: none"><li>▪ Top: White, Tan, and Reflective Gray</li><li>▪ Bottom: Gray</li></ul>
<b>Overall Thickness</b>	48 mil (1.2 mm), minimum thickness (ASTM D-751) 45 mil (ASTM Type III D-4434 Spec. Requirement)
<b>Thickness Above Scrim</b>	21 mil (ASTM D-7635) 16 mil (ASTM Type III D-4434 Spec. Requirement)

## TECHNICAL INFORMATION

<b>Resistance to Static Puncture</b>	Pass (ASTM D-5602) 33 lbf (15 kg) (ASTM Type III D-4434 Spec. Requirement)
<b>Resistance to Dynamic Puncture</b>	Pass (ASTM D-5635) 14.7 ft-lbf (20 J) (ASTM Type III D-4434 Spec. Requirement)
<b>Tensile Strength</b>	295 lbf (1312 N) (ASTM D-751) 200 lbf (890 N) (ASTM Type III D-4434 Spec. Requirement)
<b>Elongation at Break</b>	27.5 & 28.5% MD & CMD <sup>1</sup> (ASTM D-751) 15 & 15% MD & CMD <sup>1</sup> (ASTM Type III D-4434 Spec. Requirement) <small><sup>1</sup> MD = Machine Direction, CMD = Cross Machine Direction.</small>
<b>Tear Strength</b>	47 lbf (209 N) (ASTM D-751) 45 lbf (200 N) (ASTM Type III D-4434 Spec. Requirement)
<b>Seam Strength</b>	Pass (ASTM D-751) 75% of original <sup>2</sup> (ASTM Type III D-4434 Spec. Requirement) <small><sup>2</sup> Failure occurs through membrane rupture not seam failure.</small>
<b>Linear Dimensional Change</b>	-0.10% (ASTM D-1204) 0.5% (ASTM Type III D-4434 Spec. Requirement)

## Solar Reflectance

EnergySmart Colors	Initial Solar Reflectance <sup>1</sup>	3-Year Solar Reflectance <sup>1</sup>
EnergySmart White <sup>2</sup>	0.84	0.76
EnergySmart Tan <sup>2</sup>	0.73	0.65
EnergySmart Reflective Gray <sup>2</sup>	0.73	0.66

<sup>1</sup> Solar Reflectance testing according to ASTM C1549.

<sup>2</sup> 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 <sup>1</sup>	3-Year Solar Reflectance Index <sup>1</sup>
EnergySmart White <sup>2</sup>	105	93
EnergySmart Tan <sup>2</sup>	89	78
EnergySmart Reflective Gray <sup>2</sup>	90	80

<sup>1</sup> Solar Reflectance Index calculated according to ASTM E1980.

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

## Thermal Emittance

EnergySmart Colors	Initial Thermal Emittance <sup>1</sup>	3-Year Thermal Emittance <sup>1</sup>
EnergySmart White <sup>2</sup>	0.86	0.85
EnergySmart Tan <sup>2</sup>	0.85	0.86
EnergySmart Reflective Gray <sup>2</sup>	0.89	0.88

<sup>1</sup> Thermal Emittance testing according to ASTM C1371, Slide Method.

<sup>2</sup> 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 III D-4434 Spec. Requirement)

## Weight Change after Immersion in Water

2.2%	(ASTM D-570)
± 3.0%	(ASTM Type III D-4434 Spec. Requirement)

## UV Exposure

10,000 hours	(ASTM G-154)
5,000 hours	(ASTM Type III D-4434 Spec. Requirement)
Cracking (7x magnification)	None
Crazing (7x magnification)	None

## Retention of Properties after Heat Ageing

Tensile Strength, % of original: Pass	(ASTM D-751)
Elongation, % of original: Pass	(ASTM D-751)
Tensile Strength, % of original: 90	(ASTM Type III 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 S 327 is rolled out after proper preparation of the approved substrate and fastened to the roof deck with appropriate mechanically attached system with Sarnafasteners in accordance with Sika's technical requirements. Sarnafil S 327 seams are heat-welded together by trained operators using hot-air welding equipment. Different mechanically attached systems 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.

### 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](http://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.

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#### Product Data Sheet

Sarnafil® S 327-48 EnergySmart  
June 2024, Version 09.01  
020905012060123002

SarnafilS327-48EnergySmart-en-US-(06-2024)-9-1.pdf

