

# PRODUCT DATA SHEET

## SARNAFIL® S 327 ENERGYSMART ROOF® MEMBRANE



\_\_\_ 48 \_\_\_ 60 \_\_\_ 72 \_\_\_ 80 \_\_\_ FELTBACK

Sarnafil S 327 EnergySmart Roof Membrane is a PVC thermoplastic membrane produced with an integral polyester reinforcement for high strength, is highly reflective, guaranteed for thickness, with heat-weldable seams, and a unique lacquer coating applied to the top of the membrane to reduce dirt pick up.

### PRODUCT INFORMATION

#### USES

Sarnafil S 327 EnergySmart Roof Membrane is used in mechanically attached applications with various fastening methods, over various substrates.

#### AREAS OF APPLICATION

- New Roofs
- Reroofs

#### FEATURES / BENEFITS

- Excellent tear strength resistance
- Factory applied lacquer coated to reduce dirt pick up
- Hot-air welded seams for long-term performance
- Proven membrane performance
- Guaranteed thickness
- Highly reflective
- Superior fire resistance

#### TESTS

#### CODES / APPROVALS

- FM Global
- Underwriters Laboratories
- Underwriters Laboratories of Canada
- ICC Code Compliance – ESR 1157
- Miami-Dade County
- Florida Building Code
- NSF/ANSI 347: Platinum Certified
- ENERGY STAR®
- California Title 24
- LEED / Green Globes

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## PRODUCT DATA

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### FORM

### COMPOSITION

High-quality, PVC membrane containing ultraviolet light stabilizers, flame retardant and polyester scrim reinforcement with a unique lacquer coating on the top surface.

### COLOR

- Top: White, Tan, and Reflective Gray
- Bottom: Gray

### PACKAGING

- **48 mil (1.2 mm) Membrane\***

Bareback: 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

Feltback: 10 ft x 100 ft (3 m x 30 m) roll, 363 lbs (165 kg) per roll,  
9 rolls per pallet

\* Made to order, minimum volume required, extended production lead times.  
Consult with Sika – Roofing representative for further information.

- **60 mil (1.5 mm) Membrane**

Bareback: 10 ft x 100 ft (3 m x 30 m) roll, 389 lbs (177 kg) per roll,  
8 rolls per pallet  
5 ft x 100 ft (1.5 m x 30 m) roll, 195 lbs (89 kg) per roll,  
12 rolls per pallet

Coverstrip: 8 in x 100 ft (20 cm x 30 m) roll, 25 lbs (12 kg) per roll,  
25 per pallet

Feltback: 10 ft x 80 ft (3 m x 24 m) roll, 354 lbs (161 kg) per roll,  
9 rolls per pallet

- **72 mil (1.8 mm) Membrane**

Bareback: 10 ft x 100 ft (3 m x 30 m) roll, 471 lbs (214 kg) per roll,  
4 rolls per pallet  
5 ft x 100 ft (1.5 m x 30 m) roll, 236 lbs (107 kg) per roll,  
9 rolls per pallet

Feltback: 10 ft x 80 ft (3 m x 24 m) roll, 419 lbs (190 kg) per roll,  
8 rolls per pallet

- **80 mil (2.0 mm) Membrane**

Bareback: 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

Feltback: 10 ft x 80 ft (3 m x 24 m) roll, 459 lbs (208 kg) per roll,  
8 rolls per pallet

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### STORAGE

### 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.

**TECHNICAL DATA**
**TYPICAL PHYSICAL PROPERTIES\***

Properties	ASTM Test Method	ASTM Type III D4434 Spec. Requirement	Typical Results			
Overall Thickness, mil	D751	45	<b>48</b>	<b>60</b>	<b>72</b>	<b>80</b>
Thickness Over Scrim, mil	--	16	21	27	35	40
Reinforcing Material	--	--	Polyester			
Felt Weight, oz/sq yd (feltback membrane only)	--	--	9	9	9	9
Breaking Strength, lbf/in (N)	D751	200 (890)	295 (1312)	305 (1356)	315 (1401)	325 (1445)
Elongation at Break, % M. D. <sup>1</sup> & C.M.D. <sup>1</sup>	D751	15 & 15	27.5 & 28.5	28.5 & 29.5	29 & 30	29.5 & 30.5
Seam Strength, % of original <sup>2</sup>	D751	75	Pass	Pass	Pass	Pass
Retention of Properties After Heat Aging	D3045	--	--	--	--	--
Tensile Strength, % of original	D751	90	Pass	Pass	Pass	Pass
Elongation, % of original	D751	90	Pass	Pass	Pass	Pass
Tearing Resistance, lbf (N)	D1004	45 (200)	47 (209)	48 (213)	48.5 (216)	49 (218)
Low Temperature Bend, -40°F (-40°C)	D2136	Pass	Pass	Pass	Pass	Pass
Accelerated Weathering Test, Hours (Florescent Light UV exposure)	G154	5,000	10,000	10,000	10,000	10,000
Cracking (7x magnification)	--	None	None	None	None	None
Discoloration (by observation)	--	Negligible	Negligible			
Crazing (7x magnification)	--	None	None	None	None	None
Linear Dimensional Change, %	D1204	0.5	-0.10	-0.12	-0.13	-0.14
Weight Change After Immersion in Water, %	D570	± 3.0	2.2	2.0	1.8	1.8
Static Puncture Resistance, lbf (kg)	D5602	33 (15)	Pass	Pass	Pass	Pass
Dynamic Puncture Resistance, ft-lbf (J)	D5635	14.7 (20)	Pass	Pass	Pass	Pass
Recycled Content	--	--	9% Pre-consumer, 1% Post-consumer			

\*Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions, and curing conditions.

<sup>1</sup>M.D. = Machine Direction, C.M.D. = Cross Machine Direction.

<sup>2</sup>Failure occurs through membrane rupture not seam failure.

EnergySmart Colors	INITIAL SOLAR REFLECTANCE <sup>1</sup>	3-YEAR SOLAR REFLECTANCE <sup>1</sup>	INITIAL THERMAL EMITTANCE <sup>2</sup>	3-YEAR THERMAL EMITTANCE <sup>2</sup>	INITIAL SOLAR REFLECTANCE INDEX	3-YEAR SOLAR REFLECTANCE INDEX
EnergySmart White <sup>3</sup>	0.84	0.76	0.86	0.85	105	93
EnergySmart Tan <sup>3</sup>	0.73	0.65	0.85	0.86	89	78
EnergySmart Reflective Gray <sup>4</sup>	0.73	0.65	0.89	0.88	90	78

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

<sup>2</sup>Thermal Emittance testing according to ASTM C1371, Slide Method.

<sup>3</sup>EnergySmart White and EnergySmart Tan membranes meet ENERGY STAR®, LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

<sup>4</sup>EnergySmart Reflective Gray membrane meets LEED, Green Globes, and California's Title 24 criteria for Low and Steep Slope applications.

## SYSTEM INFORMATION

<b>APPLICATION INSTRUCTIONS</b>	<b>APPLICATION</b>
	Sarnafil S 327 EnergySmart 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 EnergySmart 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.
<b>AVAILABILITY</b>	From Sika Corporation – Roofing Authorized Applications for use within Sarnafil systems.
<b>MAINTENANCE</b>	Standard maintenance of Sarnafil systems should include regular inspection of flashings, drains, and termination sealants at least twice a year and after each storm.
<b>WARRANTY</b>	Upon successful completion of the installed roof by the Sika Authorized Applicator, Sika Corporation will provide a warranty to the Building Owner via the Sika Authorized Applicator.
<b>LEGAL NOTES</b>	<p>All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at <a href="http://usa.sarnafil.sika.com">usa.sarnafil.sika.com</a> or by calling 800-451-2504.</p> <p>Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Safety Data Sheet which are available online at <a href="http://usa.sarnafil.sika.com">usa.sarnafil.sika.com</a> or by calling Sika's Technical Service Department at 800-451-2504. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Safety Data Sheet prior to product use.</p> <p>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 shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.</p> <p><b>NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.</b></p>

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