

## PRODUCT DATA SHEET

# Sikaplan® Fastened-60 EnergySmart

SIKAPLAN FASTENED ROOF MEMBRANE IS A PVC THERMOPLASTIC MEMBRANE

## PRODUCT DESCRIPTION

Sikaplan® Fastened-60 EnergySmart Roof Membrane is a thermoplastic PVC membrane, with polyester scrim reinforcement.

## USES

Sikaplan Fastened is mechanically attached using various attachment components over approved substrates.

### Areas of Application

- In-seam disc systems
- In-seam batten, double-weld systems
- RhinoBond® systems
- New construction and reroofing

## CHARACTERISTICS / ADVANTAGES



- Highly Reflective
- Excellent tear strength resistance
- Hot-air welded seams for strength and long term performance
- Factory applied lacquer coated to reduce dirt pick up

## APPROVALS / STANDARDS

- FM Global
- Underwriters Laboratories
- Underwriters Laboratories of Canada
- ICC Code Compliance – ESR 1157
- Miami-Dade County
- Florida Building Code
- California Title 24
- LEED/Green Globes

## PRODUCT INFORMATION

<b>Chemical Base</b>	Thermoplastic PVC membrane containing ultraviolet light stabilizers, flame retardant and polyester scrim reinforcement with a unique lacquer coating on the top surface.	
<b>Reinforcing Material</b>	Polyester	
<b>Packaging</b>	<b>60 mil (1.5 mm) Membrane</b> Bareback: <ul style="list-style-type: none"><li>▪ 10 ft x 100 ft (3 m x 30 m) roll, 348 lbs (158 kg) per roll,</li><li>▪ 8 rolls per pallet</li><li>▪ 5 ft x 100 ft (1.5 m x 30 m) roll, 174 lbs (79 kg) per roll,</li><li>▪ 12 rolls per pallet</li></ul>	
<b>Appearance / Color</b>	Top: White, Reflective Gray, and Tan Bottom: Dark Gray	
<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>Overall Thickness</b>	60 mil (nominal) 45 mil	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
<b>Thickness Above Scrim</b>	24 mil 16 mil	(-) (ASTM Type III D-4434 Spec. Requirement)

## TECHNICAL INFORMATION

<b>Resistance to Static Puncture</b>	Pass 33 lbf (15 kg)	(ASTM D-5602) (ASTM Type III D-4434 Spec. Requirement)
<b>Resistance to Dynamic Puncture</b>	Pass 14.7 ft-lbf (20 J)	(ASTM D-5635) (ASTM Type III D-4434 Spec. Requirement)
<b>Tensile Strength</b>	303 lbf (1348 N) 200 lbf (890 N)	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
<b>Elongation at Break</b>	20 & 20 % MD & CMD <sup>1</sup> 15 & 15 % MD & CMD <sup>1</sup>	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
<sup>1</sup> MD = Machine Direction, CMD = Cross Machine Direction.		
<b>Linear Dimensional Change</b>	0.24 % 0.5 max. %	(ASTM D-1204) (ASTM Type III D-4434 Spec. Requirement)
<b>Seam Strength</b>	Pass 75 % of original <sup>2</sup>	(ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)
<sup>2</sup> Failure occurs through membrane rupture not seam failure.		
<b>Low Temperature Bend</b>	Pass Pass -40°F (-40°C)	(ASTM D-2136) (ASTM Type III D-4434 Spec. Requirement)
<b>Retention of Properties after Heat Ageing</b>	Tensile Strength, Pass Elongation, Pass Tensile Strength, % of original: 90 Elongation, % of original: 90	(ASTM D-3045) (ASTM D-751) (ASTM Type III D-4434 Spec. Requirement)

<b>UV Exposure</b>	10,000 hours	(ASTM G-154)
	5,000 hours	(ASTM Type III D-4434 Spec. Requirement)
	Cracking (7x magnification)	None
	Discoloration (by observation)	Negligible
	Crazing (7x magnification)	None

<b>Weight Change after Immersion in Water</b>	2.5 % ± 3.0 max. %	(ASTM D-570) (ASTM Type III D-4434 Spec. Requirement)
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<b>Solar Reflectance</b>	<b>EnergySmart Colors</b>	<b>Initial Solar Reflectance<sup>1</sup></b>	<b>3-Year Solar Reflectance<sup>1</sup></b>
	EnergySmart White	0.85	0.75
	EnergySmart Reflective Gray	0.73	0.66
	EnergySmart Tan	0.72	0.65 <sup>2</sup>

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

<sup>2</sup> CRRC Rapid Ratings: These are interim laboratory-aged values that simulate weathered values. These values will be replaced with the measured three-year aged values upon completion of the weathering process. SRI values calculated using Rapid Ratings may change once the aged rating replaces the interim rating.

<b>Thermal Emittance</b>	<b>EnergySmart Colors</b>	<b>Initial Thermal Emittance<sup>1</sup></b>	<b>3-Year Thermal Emittance<sup>1</sup></b>
	EnergySmart White	0.89	0.90
	EnergySmart Reflective Gray	0.89	0.88
	EnergySmart Tan	0.89	0.88 <sup>2</sup>

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

<sup>2</sup> CRRC Rapid Ratings: These are interim laboratory-aged values that simulate weathered values. These values will be replaced with the measured three-year aged values upon completion of the weathering process. SRI values calculated using Rapid Ratings may change once the aged rating replaces the interim rating.

<b>Solar Reflectance Index</b>	<b>EnergySmart Colors</b>	<b>Initial Solar Reflectance Index</b>	<b>3-Year Solar Reflectance Index</b>
	EnergySmart White	107	93
	EnergySmart Reflective Gray	90	80
	EnergySmart Tan	88	78 <sup>1</sup>

<sup>1</sup> CRRC Rapid Ratings: These are interim laboratory-aged values that simulate weathered values. These values will be replaced with the measured three-year aged values upon completion of the weathering process. SRI values calculated using Rapid Ratings may change once the aged rating replaces the interim rating.

## APPLICATION INSTRUCTIONS

### APPLICATION

Sikaplan Fastened is installed on acceptable substrates and fastened to the roof deck using the approved attachment method. The membrane is heat-welded together by trained mechanics using hot-air welding equipment. Sikaplan Fastened can be used for flashings on Sikaplan Fastened roof projects.

## MAINTENANCE

Standard maintenance of Sikaplan systems should include regular inspection of flashings, drains, and termination sealants at least twice a year and after each storm.

## 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, Sika Corporation will provide a warranty to the Building Owner via the Sika Authorized Applicator

## 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.

## OTHER RESTRICTIONS

See Legal Disclaimer.

## 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.

## 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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