Sarnafil® S 327-80 EnergySmart

Sarnafil S 327 Roof Membrane is a PVC thermoplastic membrane

PRODUCT DESCRIPTION

Sarnafil® S 327-80 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

Sarnafil S 327 is used in mechanically attached applications with various fastening methods, over various 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
- ENERGY STAR®
- California Title 24
- LEED / Green Globes
## PRODUCT INFORMATION

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

### Recycled Content
9% Pre-consumer, 1% Post-consumer

### Reinforcing Material
Polyester

### Packaging
<table>
<thead>
<tr>
<th>Membrane Type</th>
<th>Dimensions</th>
<th>Weight per Roll</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 mil (2.0 mm) Membrane</td>
<td>10 ft x 100 ft (3 m x 30 m)</td>
<td>520 lbs (236 kg)</td>
</tr>
<tr>
<td>4 rolls per pallet</td>
<td>5 ft x 100 ft (1.5 m x 30 m)</td>
<td>260 lbs (118 kg)</td>
</tr>
<tr>
<td>9 rolls per pallet</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Appearance / Color
- **Top:** White, Tan, and Reflective Gray
- **Bottom:** Gray

### Shelf Life
N/A

### 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
80 mil (2.0 mm), minimum thickness 45 mil (ASTM D-751)

### Thickness Above Scrim
40 mil (ASTM D-7635)

### TECHNICAL INFORMATION

#### Resistance to Static Puncture
Pass 33 lbf (15 kg) (ASTM D-5602)

#### Resistance to Dynamic Puncture
Pass 14.7 ft-lbf (20 J) (ASTM D-5635)

#### Tensile Strength
325 lbf (1445 N) (ASTM D-751)
200 lbf (890 N) (ASTM Type III D-4434 Spec. Requirement)

#### Elongation at Break
29.5 & 30.5% MD & CMD\(^1\)
15 & 15% MD & CMD\(^1\) (ASTM Type III D-4434 Spec. Requirement)

#### Linear Dimensional Change
-0.14% 0.5% (ASTM D-1204)

#### Tear Strength
49 lbf (218 N) 45 lbf (200 N) (ASTM D-1004)

#### Seam Strength
Pass 75% of original\(^2\) (ASTM D-751)

#### Low Temperature Bend
Pass Pass -40°F (-40°C) (ASTM D-2136)

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1 MD = Machine Direction, CMD = Cross Machine Direction.

2 Failure occurs through membrane rupture not seam failure.
## Retention of Properties after Heat Ageing

- **Tensile Strength, % of original**: Pass (ASTM D-3045, ASTM D-751, ASTM Type III D-4434 Spec. Requirement)
- **Elongation, % of original**: Pass
- **Tensile Strength, % of original**: 90
- **Elongation, % of original**: 90

## UV Exposure

<table>
<thead>
<tr>
<th>Test</th>
<th>Time</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cracking</td>
<td>10,000 hours</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>5,000 hours</td>
<td>None</td>
</tr>
<tr>
<td>Discoloration</td>
<td>(by observation)</td>
<td>Negligible</td>
</tr>
<tr>
<td>Crazing</td>
<td>(7x magnification)</td>
<td>None</td>
</tr>
</tbody>
</table>

## Weight Change after Immersion in Water

- **1.8% ± 3.0%** (ASTM D-570, ASTM Type III D-4434 Spec. Requirement)

## Solar Reflectance

<table>
<thead>
<tr>
<th>EnergySmart Colors</th>
<th>Initial Solar Reflectance$^1$</th>
<th>3-Year Solar Reflectance$^1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>EnergySmart White$^2$</td>
<td>0.84</td>
<td>0.76</td>
</tr>
<tr>
<td>EnergySmart Tan$^2$</td>
<td>0.73</td>
<td>0.65</td>
</tr>
<tr>
<td>EnergySmart Reflective Gray$^2$</td>
<td>0.73</td>
<td>0.66</td>
</tr>
</tbody>
</table>

$^1$ 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

<table>
<thead>
<tr>
<th>EnergySmart Colors</th>
<th>Initial Thermal Emittance$^1$</th>
<th>3-Year Thermal Emittance$^1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>EnergySmart White$^2$</td>
<td>0.86</td>
<td>0.85</td>
</tr>
<tr>
<td>EnergySmart Tan$^2$</td>
<td>0.85</td>
<td>0.86</td>
</tr>
<tr>
<td>EnergySmart Reflective Gray$^2$</td>
<td>0.89</td>
<td>0.88</td>
</tr>
</tbody>
</table>

$^1$ 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

<table>
<thead>
<tr>
<th>EnergySmart Colors</th>
<th>Initial Solar Reflectance Index$^1$</th>
<th>3-Year Solar Reflectance Index$^1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>EnergySmart White$^2$</td>
<td>105</td>
<td>93</td>
</tr>
<tr>
<td>EnergySmart Tan$^2$</td>
<td>89</td>
<td>78</td>
</tr>
<tr>
<td>EnergySmart Reflective Gray$^2$</td>
<td>90</td>
<td>80</td>
</tr>
</tbody>
</table>

$^1$ 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.

### APPLICATION INSTRUCTIONS

**APPLICATION**

Sarnafil® S 327-80 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 seams are heat-welded together by trained operators using hot-air welding.
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 systems should include regular inspections 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

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