

## PRODUCT DATA SHEET

# Sarnatherm® MPS

Rigid, closed cell, molded polystyrene insulation board

### PRODUCT DESCRIPTION

Sarnatherm® MPS is a rigid, closed cell, molded polystyrene insulation board that is used in Sika waterproofing applications.

### USES

Wherever insulation is required within a waterproofing protected membrane assembly (PMA).

### AREAS OF APPLICATION

- Green Roofs
- Plaza Decks

### CHARACTERISTICS / ADVANTAGES

- High compressive strength: 40 psi and 60 psi
- Stable long-term R-value
- Moisture resistant

### APPROVALS / STANDARDS

- ASTM C 578, Type XIV (40 psi)
- ASTM C 578, Type XV (60 psi)
- UL Classified

# PRODUCT INFORMATION

<b>Chemical Base</b>	Polystyrene Foam Core
<b>Packaging</b>	<ul style="list-style-type: none"> <li>▪ 4 ft x 8 ft (1.2 m x 2.4 m)</li> <li>▪ Various Thicknesses</li> </ul>
<b>Shelf Life</b>	N/A
<b>Storage Conditions</b>	<p>When stored outdoors, the insulation should be stacked on pallets at least 4" (102 mm) above the surface level and protected from exposure to direct sunlight and weather using an opaque, light-colored tarpaulin. <b>Do not use a dark colored tarpaulin.</b> The factory applied packaging is intended only for protection during transit and should only be slit enough to prevent accumulation of condensation then removed prior to immediate use. Insulation that becomes wet or damaged should be removed and replaced with dry insulation</p>

Thickness	40 psi		
	Thickness	R-Value <sup>1</sup>	RSI <sup>1</sup>
1" (25 mm)	4.4	0.77	
1-1/8" (29 mm)	5	0.88	
1-1/2" (38 mm)	6.6	1.16	
1-11/16" (43 mm)	7.5	1.32	
2" (51 mm)	8.8	1.55	
2-1/4" (57 mm)	10	1.76	
2-1/2" (63 mm)	11	1.94	
3" (76 mm)	13.2	2.32	
3-3/8" (86 mm)	15	2.64	
4" (102 mm)	17.6	3.10	
4-1/2" (114 mm)	20	3.52	
6" (152 mm)	26.4	4.65	
6-3/4" (171 mm)	30	5.28	
8" (203 mm)	35.2	6.20	
	60 psi		
	Thickness	R-Value <sup>1</sup>	RSI <sup>1</sup>
1" (25 mm)	4.5	0.79	
1-1/8" (29 mm)	5	0.88	
1-1/2" (38 mm)	6.8	1.19	
1-11/16" (43 mm)	7.5	1.32	
2" (51 mm)	9	1.59	
2-1/4" (57 mm)	10	1.76	
2-1/2" (63 mm)	11.3	1.98	
3" (76 mm)	13.5	2.38	
3-3/8" (86 mm)	15	2.64	
4" (102 mm)	18	3.17	
4-1/2" (114 mm)	20	3.52	
6" (152 mm)	27	4.76	
6-3/4" (171 mm)	30	5.28	
8" (203 mm)	36	6.34	

<sup>1</sup> R-value at 75°F (24°C)



Density	<b>40 psi</b>	<b>60 psi</b>	(ASTM C-303)
	2.4 lb/ft <sup>3</sup> (40 kg/m <sup>3</sup> )	3.0 lb/ft <sup>3</sup> (48 kg/m <sup>3</sup> )	

## TECHNICAL INFORMATION

Compressive Strength	40 psi (276 kPa)	(ASTM D-1621)
	60 psi (414 kPa)	

Flexural Strength	<b>40 psi</b>	<b>60 psi</b>	(ASTM C-203)
	60 psi (414 kPa)	75 psi (517 kPa)	

Thermal Conductivity	K-value per inch, Btu·in/°F·ft <sup>2</sup> ·h (W/°K·m)			(ASTM C-518)
	<b>40 psi</b>	<b>at 25°F (-4°C)</b>	<b>at 40°F (5°C)</b>	
	0.20 (0.029)	0.21 (0.030)	0.23 (0.033)	

<b>60 psi</b>	<b>at 25°F (-4°C)</b>	<b>at 40°F (5°C)</b>	<b>at 75°F (24°C)</b>	(ASTM C-518)
	0.20 (0.028)	0.21 (0.030)	0.22 (0.032)	

Thermal resistance	R-value per inch, °F·ft <sup>2</sup> ·h/Btu (°K·m <sup>2</sup> /W)			(ASTM C-518)
	<b>40 psi</b>	<b>at 25°F (-4°C)</b>	<b>at 40°F (5°C)</b>	
	5.0 (0.88)	4.8 (0.85)	4.4 (0.77)	

<b>60 psi</b>	<b>at 25°F (-4°C)</b>	<b>at 40°F (5°C)</b>	<b>at 75°F (24°C)</b>	(ASTM C-518)
	5.1 (0.90)	4.9 (0.86)	4.5 (0.79)	

Service Temperature	165°F (74°C)
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Water Absorption	0.3 % after 24 hrs ambient storage	(ASTM C-272)
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Permeability to Water Vapor	2.5 perm at 1" thickness	(ASTM E-96)
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Reaction to Fire	Flame Spread: <25 Smoke Development: <450	(ASTM E-84)
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## 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.

### LIMITATIONS

- Care must be taken whenever solvents are present near polystyrene insulation.
- Do not use solvent based adhesives with systems incorporating polystyrene insulation.
- Foam plastic insulation will ignite if exposed to fire of sufficient heat and intensity. Protect foam insulation from exposure to open flame or other ignition sources

- during shipment, storage, and installation.
- Polystyrene insulations should not be used in direct contact with chimneys, heater vents, steam pipes, or other surfaces where temperatures exceed 150°F (65°C).
  - Bareback membranes cannot be installed in contact with polystyrene.
  - Polystyrene insulations should have additional protection in addition to normally specified cover boards in areas where dark membranes are used and where "reflected solar energy" is expected to be present.
  - Areas adjacent to higher walls or other structures with reflective cladding should be considered for additional heat protection. For example, areas near metal or glass cladding, or near, or in between large groupings of mechanical equipment, or near higher reflective parapets, should be considered for additional heat protection. Additional heat protection for such roof areas include covering roofing membrane with Sarnafil PVC Protection Layer and then applying pavers or ballast to the affected area.
  - Polystyrene insulation is susceptible to degradation when exposed to high temperatures or when exposed to solvents or solvent fumes. The typical maximum service temperature for polystyrene insulations is 165°F (74°C). Should ambient or surface temperature be expected to exceed this value, please consult the manufacturer of the insulation.

## 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

Sarnatherm MPS is installed by a Sarnafil Authorized Applicator. It is installed over the membrane in PMA waterproofing systems; the overburden is utilized to hold the insulation in place. Polystyrene must not come in contact with PVC. Always place a separation layer between the Sarnatherm MPS and the membrane.

## MAINTENANCE

Standard maintenance of Sarnafil or 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

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