BUILDING TRUST

PRODUCT DATA SHEET

Sarnatherm® EPS

Rigid expanded polystyrene insulation board

PRODUCT DESCRIPTION

Sarnatherm® EPS is a rigid expanded polystyrene insulation board. Sarnatherm EPS is installed directly on the substrate (depending on local code or FM requirements), over an approved thermal barrier, or directly on the existing roof surface prior to the application of the Sarnafil® membrane or Sikaplan® membrane.

USES

Wherever insulation is required within a conventional roof assembly.

AREAS OF APPLICATION

- New Roofs
- Recover Roofs
- Mechanically Fastened Systems
- Adhered Systems

CHARACTERISTICS / ADVANTAGES

- Manufactured with no CFCs or HCFCs
- Virtually no GWP (Global Warming Potential)
- Zero ODP (Ozone Depletion Potential)
- Recognized as resistant to mold growth

APPROVALS / STANDARDS

- ASTM C 578 Type VIII, II, IX, XIV, XV
- UL 1256, 790, 263
- FM 4450, 4470
- Miami-Dade County
- State of Florida

PRODUCT INFORMATION

Chemical Base	Polystyrene Foam Core
Packaging	▪ 4 ft x 4 ft (1.2 m x 1.2 m) ▪ 4 ft x 8 ft (1.2 m x 2.4 m) ▪ Various Thicknesses
Shelf Life	N/A
Storage Conditions	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. **Do not use a dark colored tarpaulin**. 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.

Density

	Type VIII	Type II	Type IX	
Nominal	1.25 psf	1.5 psf	2.0 psf	(ASTM C-303)
Minimum	1.15 psf	1.35 psf	1.8 psf	

TECHNICAL INFORMATION

Compressive Strength

Type VIII	Type II	Type IX	
13.0 psi (90 kPa)	15.0 psi (104 kPa)	25.0 psi (173 kPa)	(ASTM D-1621)

Minimum values at yield or 10 % deformation, whichever occurs first.

Flexural Strength

Type VIII	Type II	Type IX	
30 psi (208 kPa)	35 psi (240 kPa)	50 psi (345 kPa)	(ASTM C-203)

Minimum values

Dimensional Stability

Type VIII	Type II	Type IX	
2%	2%	2%	(ASTM D-2126)

Maximum values

Thermal Conductivity

C-value per inch, BTU/hr·ft²·°F

Type VIII			
@25°F (-4°C)	@40°F (5°C)	@75°F (24°C)	(ASTM C-177)
0.22	0.24	0.26	

	Type II			
	@25°F (-4°C)	@40°F (5°C)	@75°F (24°C)	
	0.21	0.22	0.24	(ASTM C-177)
	Type IX			
	@25°F (-4°C)	@40°F (5°C)	@75°F (24°C)	
	0.20	0.21	0.23	(ASTM C-177)
Thermal resistance	**R-value per inch, hr·ft²·°F/BTU**			
	Type VIII			
	@25°F (-4°C)	@40°F (5°C)	@75°F (24°C)	
	4.5	4.3	3.9	(ASTM C-177)
	Type II			
	@25°F (-4°C)	@40°F (5°C)	@75°F (24°C)	
	4.8	4.6	4.2	(ASTM C-177)
	Type IX			
	@25°F (-4°C)	@40°F (5°C)	@75°F (24°C)	
	5.0	4.8	4.4	(ASTM C-177)
Service Temperature	**Maximum Use Temperature**			
	Type VIII	**Type II**	**Type IX**	
	165°F (74°C)	165°F (74°C)	165°F (74°C)	
Water Absorption	**Type VIII**	**Type II**	**Type IX**	
	3	3	2	(ASTM C-272)
	Maximum values, % by volume			
Permeability to Water Vapor	**Type VIII**	**Type II**	**Type IX**	
	3.5 perm	3.5 perm	2.5 perm	(ASTM E-96)
	Maximum values, 1" thickness			
Reaction to Fire	**Oxygen index:**			
	Type VIII	**Type II**	**Type IX**	
	24.0	24.0	24.0	(ASTM D-2863)
	Minimum Values, % by volume			
	Flame spread:			
	Type VIII	**Type II**	**Type IX**	
	25	25	25	(ASTM E-84)
	Maximum values			
	Smoke development:			
	Type VIII	**Type II**	**Type IX**	
	450	450	450	(ASTM E-84)
	Maximum values			

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 for roof membrane attachment.
- 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 EPS is installed by a Sarnafil Authorized Applicator. Sarnatherm EPS may be installed either by mechanical-attachment to the roof deck with Sarnafasteners and Sarnaplates, by full attachment with low rise sprayed urethane foam or partial attachment with foam adhesive (options depend on deck type and Sarnafil system to be installed).
If the compressive strength of the EPS board is less than 20 psi, then a gypsum cover board must be installed over the board for load distribution and resistance purposes.
Contact Sika Corporation – Roofing Technical Department regarding alternative methods of attachment.

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 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.

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 the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **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.**

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Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: +1-800-933-7452
Fax: +1-201-933-6225
usa.sika.com

Sika Sarnafil
100 Dan Road
Canton, MA 02021
Phone: +1 800-451-2504
Fax: +1 781-828-5365
usa.sika.com/sarnafil
webmaster.sarnafil@us.sika.com

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537