BUILDING TRUST

PRODUCT DATA SHEET

Sarnatherm® XPS

Rigid extruded polystyrene insulation board

PRODUCT DESCRIPTION

Sarnatherm® XPS is a rigid extruded polystyrene insulation board that can be used in either a Sika roofing or waterproofing application.

USES

Wherever insulation is required within a conventional roof assembly or waterproofing application.

AREAS OF APPLICATION

- New Roofs
- Recover Roofs
- Mechanically Attached Systems
- Adhered Systems
- Waterproofing Systems

CHARACTERISTICS / ADVANTAGES

- Low water absorption
- Available in various sizes

APPROVALS / STANDARDS

- ASTM C 578, Type XII, X, XIII, IV, VI, VII, V
- CAN/ULC S701, Type 4

PRODUCT INFORMATION

Chemical Base

Polystyrene foam core with a smooth skin surface on the face and back surfaces

Packaging

- 2 ft x 8 ft (0.6 m x 2.4 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

Thickness

Thickness	R-Value	C-Value
1.0" (25 mm)	5.0	0.200
1.5" (38 mm)	7.5	0.133
2.0" (51 mm)	10.0	0.100
2.5" (64 mm)	12.5	0.080
3.0" (76 mm)	15.0	0.067
4.0" (102 mm)	20.0	0.050

Not all available thicknesses are listed.

TECHNICAL INFORMATION

Compressive Strength

Type VI	Type VII	Type V	
40.0 psi (276 kPa)	60.0 psi (414 kPa)	100 psi (690 kPa)	(ASTM D-1621)

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

Flexural Strength

Type VI	Type VII	Type V	
60.0 psi (414 kPa)	75.0 psi (517 kPa)	100 psi (690 kPa)	(ASTM C-203)

Minimum values

Dimensional Stability

Type VI	Type VII	Type V	
<2%	<2%	<2%	(ASTM D-2126)

Reaction to Fire

Type VI	Type VII	Type V	
Oxygen Index	Oxygen Index	Oxygen Index	(ASTM D-2863)
24.0	24.0	24.0	

% by volume

Type VI	Type VII	Type V	
Flame spread	Flame spread	Flame spread	(ASTM E-84)
5	5	5	

Type VI	Type VII	Type V	
Smoke Developed	Smoke Developed	Smoke Developed	(ASTM E-84)
165	165	165	

*These values are not intended to reflect hazards presented by this or any other material under actual fire conditions

Permeability to Water Vapor

Type VI	Type VII	Type V	
< 1.5 perm	< 1.5 perm	< 1.5 perm	(ASTM E-96)

*Water vapor permeance varies with product type and thickness. Values are based on the desiccant method and they apply to insulation 1" (25 mm) or greater in thickness

Service Temperature	**Maximum Use Temperature**			
	Type VI	**Type VII**	**Type V**	
	165°F (74°C)	165°F (74°C)	165°F (74°C)	
Water Absorption	**Type VI**	**Type VII**	**Type V**	
	<0.3	<0.3	<0.3	(ASTM C-272)
	% by volume, maximum values			
Thermal resistance	**Type VI**	**Type VII**	**Type V**	
	5.0	5.0	5.0	(ASTM C-177)

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 XPS is installed either under or over the Sika roofing/waterproofing membrane depending on the system design. Overburden is utilized to hold the insulation in place in a waterproofing application. Polystyrene should not come in contact with PVC. Always place a separation layer such as Sarnafelt NWP between the Sarnatherm XPS and the membrane in both roofing and waterproofing applications. During installation in hot, sunny weather, protect the insulation with a white covering to prevent excessive heat build-up and potential warping.
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.

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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