

BUILDING PRODUCTS LISTING PROGRAM

Class: Thermal Insulation – Foam Plastic

Customer: Shelter Enterprises, Inc.
Location: P.O. Box 618, Cohoes NY 12047

Listing No. B1086-1
Project No. RJ3995-E
Effective Date: June 1, 2015
Last Revised: **January 1, 2016**
Expires: N/A
Website: <http://www.shelter-ent.com/>
Product:

- Shelter Enterprises Expanded Polystyrene Thermal Insulation Boards
- Shelter Enterprises Geofoam.
- Shelter Enterprises Expanded Polystyrene for Exterior Insulation and Finish Systems (EIFS).

Standards: ASTM C578 "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation

ASTM D6817 "Standard Specification for Rigid Cellular Polystyrene Geofoam"

ASTM E2430 "Standard Specification For Expanded Polystyrene ("EPS") Thermal Insulation Boards For Use In Exterior Insulation and Finish Systems ("EIFS").

ASTM E84 "Standard Test Method for Surface Burning Characteristics of Building Materials".

Models: The following outlines Shelter Enterprises, Inc. Expanded Polystyrene Thermal Insulation Board specifications in accordance with ASTM C578:

Shelter Enterprises, Inc. Expanded Polystyrene Thermal Insulation Board				
PROPERTY	Type I	TYPE VIII	TYPE II	TYPE IX
Compressive Strength, Minimum @ 10% Deformation (psi)	10.0	13.0	15.0	25.0
Thermal Resistance, Minimum @ 1 inch Thick (F*ft ² *h/Btu)	3.6	3.8	4.0	4.2
Flexural Strength, Minimum (psi)	25.0	30.0	35.0	50.0
Water Vapor Permeance, @ 1 inch	5.0	3.5	3.5	2.5

Thickness, Maximum (Perms)				
Water Absorption By Volume, Maximum (%)	4.0	3.0	3.0	2.0
Dimensional Stability Linear Change, Maximum (%)	2.0	2.0	2.0	2.0
Oxygen Index, Minimum (%)	24.0	24.0	24.0	24.0
Density, Minimum (lbs/ft ³)	0.90	1.15	1.35	1.80

Note 1: Shelter Enterprises manufactures molded Type I EPS insulation at minimum 0.95 lbs/ft³ density for EIFS where required.

EIFS products comply with the requirements of ASTM E2430.

Shelter Enterprises molded Type I products for use in Exterior Insulating Finish Systems (EIFS) bearing the QAI_{US} certification mark meet the requirements of ASTM E2430.

Physical Properties for Shelter Enterprises, Inc. EPS Geofoam in accordance with ASTM D6817

Shelter Enterprises, Inc. Geofoam Products							
PROPERTY		EPS15	EPS19	EPS22	EPS29	EPS39 ²	EPS46 ²
Density Minimum kg.m ³ (lbs/ft ³)		14.4 (0.90)	18.4 (1.15)	21.6 (1.35)	28.8 (1.80)	38.4 (2.40)	45.7 (2.85)
Compressive Strength %, kPa (psi)	1	25 (3.6)	40 (5.8)	50 (7.3)	75 (10.9)	103 (15.0)	128 (18.6)
	5	55 (8.0)	90 (13.1)	115 (16.7)	170 (24.7)	241 (35.0)	300 (43.5)
	1	70	110	135	200	276	345
	0	(10.2)	(16.0)	(19.6)	(29.0)	(40.0)	(50.0)
Flexural Strength Minimum kPa (psi) @ 1%		172 (25.0)	207 (30.0)	276 (40.0)	345 (50.0)	414 (60.0)	517 (75.0)
Oxygen Index Minimum (%)		24.0	24.0	24.0	24.0	24.0	24.0

Note 2: Products noted have not been evaluated to ASTM E84 for surface burning characteristics.

Shelter Enterprises Expanded Polystyrene Products Surface Burning Characteristics, in accordance with ASTM E84³

Label:	Flame Spread Index Maximum	Smoke Developed Index Maximum	Thickness Maximum (inches)	Density Maximum (lbs/ft ³)
EPS Types I, VIII, II, IX GeoFoam EPS15, EPS17, EPS22, EPS29	< 25	< 450	4	2.0

Note³: Ceiling Measurement Only. This measurement is conducted through determination of flame spread index and smoke developed index with the removal of any contribution of molten materials ignited on the floor of the tunnel.

Product is labeled by Shelter Enterprises as outlined.

Expanded Polystyrene thermal insulation used with EIFS must be identified along one edge and one board in each package shall be marked on both faces with the following information:

- Manufacturer's name (SEI, Shelter Enterprises, Inc.),
- EIFS Type,
- Class A Flame Spread Rating (FSI < 25 SDI < 450),
- QAI_{us} logo
- The following statement "Flame Spread and Smoke Developed Ratings derived are not intended to reflect hazards under actual fire conditions"
- Material identification lot number

For all other applications, the acceptable markings will either be applied to each bundle of EPS boards through the use of at least label or stamped on at least one board per bundle, the marking label shall include:

- Shelter Enterprises Name
- EPS Thermal Insulation Type or GeoFoam EPS Type and Thickness
- Class A Flame Spread Rating (FSI < 25 SDI < 450) where appropriate,
- QAI_{us} logo
- Material identification lot number

Note: The product must be installed in accordance with the code enforced by the authority having jurisdiction. Final acceptance of the product in the final installation is subject to inspection by the authority having jurisdiction.

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing

Mark are considered to be listed by QAI.

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Questions regarding this listing may be directed to info@qai.org. Please include the listing number in the request.

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