

Product Name

TERRAFOAM® EPS

Associated Specification Section

MasterFormat 1995 # 07212

MasterFormat 2004 # 07 21 15

Manufacturer's Name

Beaver Plastics

Sept 30, 2004

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PRODUCT DESCRIPTION

PRODUCT FEATURES

- BASIC USES / RELATED USES
 - Closed cell expanded polystyrene (EPS) insulation suitable for renovation and new residential construction:
 - Above-grade under cladding such as stucco and siding.
 - In masonry cavity walls.
 - Exterior Insulated Finish Systems (EIFS).
 - Conventional and slope-to-drain roofing.
 - Under concrete slabs on grade.
 - Grade beams, foundation walls, shallow foundations.
 - Miscellaneous uses:
 - Floatation devices such as docks and rafts.
 - Coolers, freezers, and ice arenas.
 - Hot tub covers.
 - Packaging, protection, container linings.
- PRODUCT ATTRIBUTES AND CHARACTERISTICS
 - Resistant to freeze/thaw.
 - Zero capillarity and low moisture absorption properties.
 - Breathable, allowing transmission of water vapour.
 - 'ANR' grade, conditioned and sized expressly for exterior insulated finish systems.
 - Contains no CFCs, HCFCs, or other refrigerant gases.
 - EPS is biologically inert and will not support mould, mildew or fungus growth.
 - Contains a chemical additive to inhibit accidental ignition from a small fire source.
 - Non-toxic and hypo-allergenic.
 - The insulation value (R-Value) of TERRAFOAM increases as temperature decreases.
 - Buoyancy factor: 60 lb/cu ft.
- SELECTION CRITERIA
 - Available in three standard board sizes; custom sizes can be ordered.

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PRODUCT DESCRIPTION

- Range of densities available to meet specific application requirements.
- Flat or tapered boards, with plain or shiplapped edges.
- Available in flat sheet form or custom profiles..
- **APPLICABLE STANDARDS, RELATED REFERENCES**
 - ASTM C578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
 - ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials
 - ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
 - ASTM D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
 - ASTM D2842 - Standard Test Method for Water Absorption of Rigid Cellular Plastics.
 - CAN/ULC-S701 – Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- **QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS**
 - Manufactured to meet CAN/ULC-S701 for Type 1, 2 and 3 insulation.
 - Code Evaluation Reports received:
 - Testing and ongoing evaluations conducted by Intertek Testing Services NA, Ltd.(ITS) - Warnock Hersey (AA-647-2).
 - ITS Certification Listing Number L20619
 - Canadian Construction Materials Centre, Evaluation 12982-L
 - International Code Council - Evaluation Service, Evaluation ER-6100
 - Product certified under Warnock Hershey Third Party Certification Program.
 - ISO 9001:2000 Registered Company (Quality Certification Bureau #94-41).
- **PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS**
 - TERRAFOAM must be protected from damage during transit.
 - TERRAFOAM must be protected from UV degradation during storage and after erection.
- **LIMITATIONS**
 - Degrades with lengthy exposure to ultra-violet rays.
 - Product will burn when exposed to large continuous flame.

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PRODUCT DESCRIPTION

- SAFETY PRECAUTIONS
 - Normal fire precautions and good housekeeping methods must be followed during storage and application.
- AVAILABILITY
 - Available direct from Beaver Plastics or appointed distributors
- COST
 - Varies with substrate condition and configuration, and relative size of building.
 - Consult manufacturer or distributors for specific product costs or relative costs.

PRODUCT PROPERTIES

- MATERIALS, COMPOSITION, PROPERTIES
 - Technical Properties
 - Rigid, closed cell, expanded polystyrene (EPS) board, to CAN/ULC-S701 for Type 1, 2 and 3.
 - Flame Spread / Smoke Developed Index: Less than 25/450, to ASTM E84.

PHYSICAL PROPERTY	UNITS IMPERIAL R VALUE	UNITS SI (METRICS)	ASTM TEST PROCEDURE	TERRAFOAM TYPE 1		TERRAFOAM TYPE 2		TERRAFOAM TYPE 3	
				Imperial	Metric	Imperial	Metric	Imperial	Metric
Minimum thermal Resistance (R-Value)	hr. ft ² °F BTU /1 in.	m ² °C W/25mm	C-177-93 @ 0°C (32°F)	4.07	0.72	4.40	0.77	4.62	0.81
			C-177-93 @ 24°C (75°F)	3.70	0.65	4.00	0.70	4.20	0.74
Compressive Strength	psi	kPa	D 1621-73	10	70	16	110	20.4	140
Capillary Action	-----	-----	-----	none	none	none	none	none	none
Water vapor permeance (max)	perm - in	ng/Pa.s.m ²	E 96-80	5.25	300	3.5	200	2.25	130
Water absorption % (max)	%	%	D 2842-69	6.0	6.0	4.0	4.0	2.0	2.0

- ACCESSORIES
 - Adhesives, insulation fasteners.
- DIMENSIONS
 - Standard board sizes, up to 610 mm (24 inches) thick:
 - Roofing: 1220 x 1220 mm (4' x 4') panels.
 - Half Size: 610 x 2440 mm (2' x 8') panels.

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PRODUCT DESCRIPTION

- Standard: 1220 x 2440 mm (4' x 8') panels.

PRODUCT PLACEMENT

- PREPARATION
 - Surfaces must be dry and ready to receive insulation.
- INSTALLATION
 - Install products in accordance with the manufacturer's instructions for each specific application.
 - Product must be covered with a finish acceptable to local building authorities.
 - Used as sheathing, tape edges and joints to stop wind-driven air infiltration/exfiltration.
- MAINTENANCE INSTRUCTIONS AND PROCEDURES
 - Product should not be exposed to volatile hydrocarbons and anhydrous acids, which may attack the expanded polystyrene.

Corporate Identification

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Technical Services Available

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Classification and Filing

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07 21 15 – Board Insulation

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07212 – Board Insulation

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PRODUCT DESCRIPTION

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END