



**Product Name**

TERRAFOAM® EPE (Expanded Polyethylene)

April 30, 2019

**Associated Specification Section**

MasterFormat 2004 # 03 10 00

MasterFormat 1995 # 03115

**Manufacturer's Name**

Beaver Plastics

**PRODUCT DESCRIPTION**

**PRODUCT FEATURES**

- DESCRIPTION / BASIC USES
  - Low density closed cell extruded polyethylene (EPE) insulation that is non-collapsing, rebounding fill suitable for hydrocarbon exposures.
- BASIC USES / RELATED USES
  - Designed to be used for a wide range of construction applications including protecting grade beams, structural slabs and pile caps.
- PRODUCT ATTRIBUTES AND CHARACTERISTICS
  - Absorbs large strains from swelling clays and freezing moist sub-grades through elastic compression and does not collapse or crush on compression.
  - Low modulus of elasticity with excellent recovery from large rates of cyclic strain.
  - Excellent resistance to freeze/thaw cycles.
  - All weather applications – performance not affected by water, or freezing conditions.
  - Low water absorption.
  - Long term buoyancy characteristics.
  - Excellent chemical resistance for certain hydrocarbon exposures.
  - Offers thermal resistance and can function as thermal insulation.
- SELECTION CRITERIA
  - Suitable for cold climate applications, where soil is prone to heaving.
  - Suitable for exposure to certain hydrocarbons. Chemical resistance properties as follows:

Substance	Behaviour @ 20°C	Behaviour @ 60°C	Substance	Behaviour @ 20°C	Behaviour @ 60°C
Acetone	Limited Resistance	Not Resistant	Kerosene	Limited Resistance	Not Resistant
Benzene	Limited Resistance	Not Resistant	Ketones	Limited Resistance	Not Resistant
Bitumen	Resistant	Limited Resistant	Methanol	Resistant	Resistant
Crude Oil	Resistant	Limited Resistant	MEK	Limited Resistance	Not Resistant
Diesel Fuel	Resistant	Not Resistant	Petroleum	Limited Resistance	Not Resistant
Fuel Oil	Limited Resistance	Not Resistant	Toluene	Limited Resistance	Not Resistant



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Gasoline	Limited Resistance	Not Resistant	Xylene	Limited Resistance	Not Resistant
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- APPLICABLE STANDARDS, RELATED REFERENCES
  - ASTM D3575 – Standard Test Methods for Flexible Cellular Materials Made from Olefin Polymers.
- PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS
  - Must be protected from damage during transit.
  - Must be protected from UV degradation during storage and after erection.
- LIMITATIONS
  - Product will burn when exposed to large continuous flame.
- SAFETY PRECAUTIONS
  - Normal fire precautions and good housekeeping methods must be followed during storage and application.
- AVAILABILITY
  - Available from Beaver Plastics directly.
- COST
  - Varies with substrate condition and configuration, and relative size of building.
  - Consult manufacturer for specific product costs or budget pricing.

**PRODUCT PROPERTIES**

- MATERIALS, COMPOSITION, PROPERTIES
  - Material: Low density closed cell extruded polyethylene (EPE).
  - Thermal Resistance: RSI 0.56/25 mm (R-3.2/inch).
  - Technical Properties:



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Property	Test Method	Units	PE-15	PE-22
Compressive Strength	ASTM D3575 Suffix D	kPa (psi) @ 25%	28-48 (4-7)	34-76 (5-11)
		kPa (psi) @ 50%	69-103 (10-15)	83-117 (12-17)
Compressive Set	ASTM D3575 Suffix B	% @ 2 hours	32	34
		% @ 24 hours	20	25
Nominal Density		kg/m <sup>3</sup> (lbs/ft <sup>3</sup> )	> 9.6 (1.6)	> 12.6 (2.1)
Service Temperature °C		Degrees Celsius	-35 to +180	-35 to +180
Compressive Creep	ASTM D3575 Suffix BB	%	3 at 1 psi	10 at 2 psi
		%	3 at 7 kPa	10 at 14 kPa
Water Absorption	ASTM D3575 Suffix L	Kg/m <sup>2</sup> (lbs/ft <sup>2</sup> )	0.138 (0.02)	0.069 (0.01)
		% by volume	< 0.4%	< 0.2%
Long Term tested Compressive Strengths		10%	11 kPa	16 kPa
		25%	28 kPa	35 kPa
		50%	67 kPa	74 kPa
		75%	172 kPa	206 kPa

- DIMENSIONS
  - Thickness: available in a variety of thicknesses.
  - Standard board sizes:
    - 1220 x 2740 mm (4' X 9') panels.

**PRODUCT PLACEMENT**

- INSTALLATION
  - Install products in accordance with the manufacturer's instructions for each specific application.



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**Corporate Identification**

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**Technical Services Available**

Phone toll free or e-mail

**Classification and Filing**

UniFormat 2010  
A2010 Walls for Subgrade Enclosures  
A2010.90 Subgrade Enclosure Wall Supplementary Components  
B1010 Floor Construction  
B1010.90 Floor Construction Supplementary Components  
B3040.30 Horizontal Waterproofing Membrane  
B3040.90 Horizontal Enclosure Supplementary Components

OmniClass 2010 Table 23 - Products

23-10 10 11 35 Expanded Polystyrene Compressible Fill  
23-20 50 31 21 Products for Prevention of Subsoil Heaving

MasterFormat 2011:

03 10 00 – Concrete Forms and Accessories

MasterFormat 1995:

03115 – Concrete Forms and Accessories

**END**