



Product Name

FROST CUSHION®

April 30, 2019

Associated Specification Section

MasterFormat 2004 # 03 11 24

MasterFormat 1995 # 03116

Manufacturer's Name

Beaver Thermal Solutions Inc.

PRODUCT DESCRIPTION

PRODUCT FEATURES

- DESCRIPTION / BASIC USES
 - A closed cell expanded polystyrene (EPS) void form material for use under grade beams and other concrete elements to compensate for frost and moisture-induced swelling of underlying soils that might otherwise lift or fracture concrete foundations.
 - FROST CUSHION reacts to subgrade uplift by deforming and collapsing at a much lower stress than “solid” void form products and therefore is an excellent choice for protecting grade beams under lighter wood frames and metal structures.
- PRODUCT ATTRIBUTES AND CHARACTERISTICS
 - Static compressible inclusion, where frost uplift or clay soil swell will compress the void material to protect the grade beam or other structural members from damage.
 - Absorbs frost and moisture induced swelling of underlying soil.
 - Provides structural capacity to adequately support concrete placing, finishing, and weight of the concrete element itself.
 - Freeze/thaw resistant and low moisture absorption.
 - Contains no CGCs, HCFCs, or other refrigerant gasses.
 - 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.
 - Non-biodegradable and has no pest nutrient value.
- SELECTION CRITERIA
 - Product is available in two depths and four standard widths, with custom sizes available on request.
 - Suitable for colder climate applications, where sub-soil is prone to frost heaving.
 - Manufactured at Edmonton AB and Chilliwack BC, Canada



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- **APPLICABLE STANDARDS, RELATED REFERENCES**
 - ASTM E84 – Standard Test Methods for Surface Burning Characteristics of Building 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 C578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - ASTM D1621 - Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
 - ASTM D1623 - Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
 - ASTM D2842 - Standard Test Method for Water Absorption of Rigid Cellular Plastics.
 - ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
 - CAN/ULC-S701 – Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- **PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS**
 - Must be protected from damage during transit.
 - Pile and store void form material on raised platforms.
 - Protect from UV degradation during storage and after erection, if product is to be exposed for one month or more.
 - Do not expose to volatile hydrocarbons, such as fuel oils, gasoline, alcohols.
- **LIMITATIONS**
 - Product will burn when exposed to large continuous flame.
 - Surface may degrade with lengthy exposure to ultra-violet rays or direct sunlight.
- **SAFETY PRECAUTIONS**
 - Normal fire precautions and good housekeeping methods must be followed during storage and application.
- **AVAILABILITY**
 - Available direct from Beaver Thermal Solutions or appointed distributors.



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- **COST**
 - Varies with substrate configuration and relative size of building.
 - Consult manufacturer national and regional offices for specific product costs or relative costs.

PRODUCT PROPERTIES

- **MATERIALS, COMPOSITION, PROPERTIES**
 - Technical Properties
 - Rigid closed cell, expanded polystyrene (EPS) board.
 - Flame Spread Index/Smoke Developed Index: Less than 25/450 to ASTM E84.
 - At 50% compression Frost Cushions uplift force is less than 30 kPa (4.4 psi).

- **DIMENSIONS**

- Standard sizes available:

THICKNESS	NOMINAL WIDTHS*	LENGTHS
100 mm (4")	200 mm (8")	2440 mm (8')
	250 mm (10")	
	300 mm (12")	
	1220 mm (48")	
150 mm (6")	200 mm (8")	2440 mm (8')
	250 mm (10")	
	300 mm (12")	
	1220 mm (48")	

* Unless otherwise specified at time of purchase, FROST CUSHION is supplied 5 mm (1/4") narrower than stated width, in order to facilitate placement inside standard formwork.

PRODUCT PLACEMENT

- **PREPARATION**
 - Surface to receive FROST CUSHION must be prepared and level.



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● **INSTALLATION**

- Place FROST CUSHION at bottom of form with flat surface facing upwards.
- Subterra Protection Board or Plywood overlay may be used to distribute stresses from point loads.

Corporate Identification

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Technical Services Available

Phone toll free, fax or e-mail (see above)

Classification and Filing

MasterFormat 2004:
03 11 24 – Concrete Forms and Accessories

MasterFormat 1995:
03116 – Concrete Forms and Accessories

UniFormat 1998:
A1030 – Concrete Forms and Accessories

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