



Product Name

G-TEC™ Elasticized Expanded Polystyrene

April 30, 2019

Associated Specification Section

MasterFormat 1995 # 02315

MasterFormat 2004 # 31 23 23.53

Manufacturer's Name

Beaver Thermal Solutions Inc.

PRODUCT DESCRIPTION

PRODUCT FEATURES

- DESCRIPTION / BASIC USES
 - Geotechnical applications to protect retaining walls, foundations, culvert, buried pipes, abutments and other concrete structures from large lateral geomechanical earth forces, freeze-thaw cycling, and compressive cycling.
 - Packaging material where a high degree of elasticity and compression recovery is required.

- PRODUCT ATTRIBUTES AND CHARACTERISTICS
 - Closed cell expanded polystyrene (EPS) board that has been elasticized to produce improved stress/strain/time behavior for geotechnical applications.
 - Provides extended range of flexibility, which increases the design safety factor against seismic, freeze/thaw and earth pressure failure.
 - Provides elastic strain compensation when installed between the structure and the earth fill at a thickness of 5% of structure height in contact with soil.
 - Excellent insulating properties.
 - Freeze/thaw resistant and low moisture absorption.
 - Contains no CFCs, HCFCs, or other refrigerant gases.
 - 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.

- DEFINITIONS
 - At rest earth pressure develops when a wall experiences no lateral movement. This typically occurs when a wall is fully restrained, such as a basement wall supported at the top and bottom by a floor framing system and concrete slab.
 - Active state earth pressure develops when a wall is free to move outward, allowing the soil mass to stretch, mobilizing its shear strength. Lateral pressure against the wall decreases with wall movement until the minimum Active State is achieved.
 - Passive state earth pressure develops when a wall is moved into the soil, compressing the soil mass, as might occur along a section of wall that is below grade and on the opposite side from the higher section.



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- APPLICABLE STANDARDS, RELATED REFERENCES
 - 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 E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
 - ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
 - CAN/ULC-S701 – Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.

- QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS
 - Performance tests certified by Intertek Testing Services.

- PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS
 - G-TEC panels must be protected from damage during transit.
 - Pile G-TEC material on raised platforms and protect from UV degradation during storage and after erection, if product is to be exposed for one month or more.

- 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 direct from Beaver Thermal Solutions.



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- **COST**
 - Varies with substrate condition and configuration, soil type, compaction levels, wall geometry and other factors.
 - Consult manufacturer for specific product costs or budget pricing.

- **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.
 - Approximately linear stress/strain curve, with 25kPa stress at 10% strain.

- **DIMENSIONS**

THICKNESS	WIDTH	LENGTH
Varies depending on application requirements	1220 mm (48")	1220 mm (48")

PRODUCT PLACEMENT

- **PREPARATION**
 - Full geotechnical evaluation of soil type, compaction levels, wall geometry and other factors to determine site-specific requirements.
 - Surface to receive G-TEC must be prepared to manufacturer’s recommendations.

- **INSTALLATION**
 - Follow manufacturer's installation instructions.

- **MAINTENANCE INSTRUCTIONS AND PROCEDURES**
 - Product should not be exposed to volatile hydrocarbons and anhydrous acids, which may attack the expanded polystyrene.



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Corporate Identification

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Technical Services Available

Phone toll free or e-mail (see above)

Classification and Filing

MasterFormat 2004:

31 23 23.53 – Foam Board Soil/Structure Protection

MasterFormat 1995:

02315 – Foam Board Soil/Structure Protection

Uniformat 1998:

A1030 – Slab on Grade

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