

**Product Name**

G-TEC™

**Associated Specification Section**

MasterFormat 1995 # 02315

MasterFormat 2004 # 31 23 23.53

**Manufacturer's Name**

Beaver Plastics

Sept 30, 2004

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## PRODUCT DESCRIPTION

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### PRODUCT FEATURES

- BASIC USES / RELATED USES
  - Geotechnical applications to protect retaining walls, foundations, culverts, 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
  - A closed cell expanded polystyrene (EPS) board that has been elasticized to produce improved stress/strain/time behaviour 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.
- SELECTION CRITERIA
  - Product is available in one standard panel size but in various thicknesses depending on geotechnical evaluation of soil type, compaction levels, wall geometry and other factors.
- 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.

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- 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.
- APPLICABLE STANDARDS, RELATED REFERENCES
  - ASTM E84-04 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS
  - 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
  - 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 Plastics.
- COST
  - Varies with substrate condition and configuration, soil type, compaction levels, wall geometry and other factors.
  - Consult manufacturer national or regional offices for specific product costs or relative costs.

## PRODUCT PROPERTIES

- MATERIALS, COMPOSITION, PROPERTIES
  - Technical Properties

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- Rigid closed cell, elasticized expanded polystyrene (EPS) board.
- Flame Spread Index/ Smoke Developed Index: Less than 25/450 to ASTM E84.
- Approximately linear stress/strain curve, with 25 kPa stress at 10% strain.

- DIMENSIONS

THICKNESS	WIDTH	LENGTH
Varies depending on specific conditions	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 instruction.
- 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**

Phone toll free or e-mail

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**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

**END**