

Product Name

TERRAFOAM® SUBTERRA 30 PROTECTION BOARD

Associated Specification Section

Master Format 2011 # 07 21 13

Manufacturer's Name

Beaver Plastics Ltd.

March 4, 2019

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PRODUCT DESCRIPTION

PRODUCT FEATURES

DESCRIPTION

Closed cell high density expanded polystyrene (HDEPS) insulation with two layers of high strength poly-woven laminate suitable for high load compressive strength applications.

USES

Geotechnical, void form protection layer and other below grade applications:

- Void form protection layer.
- Perimeter, grade beam and under slab insulation.
- Airport runways, taxiways, and aprons.
- Large earth structures, ramps, and beams.
- Isolating bearing pads under heavy process equipment and industrial traffic.
- Frost protected shallow foundations.
- Ice arena and snow melt systems.

Above grade applications:

- In conjunction with above grade construction.
- Masonry and cavity wall construction.

PRODUCT ATTRIBUTES AND CHARACTERISTICS

- Excellent puncture resistance and extreme flex durability.
- Low moisture absorption properties.
- Provides vapour barrier protection when seams are taped.
- Light weight and easy to cut.
- Contains no CFCs, HCFCs, or other refrigerant gases.
- Biologically inert. Will not support mold, mildew or fungus growth. Not a food source for pests.
- Contains a chemical additive to inhibit accidental ignition from a small fire source.
- Non-toxic and hypo-allergenic. Does not off-gas.
- The insulation value (R-Value) increase as temperature decreases. Does not lose insulation value over time.

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SELECTION CRITERIA

- Suitable for cold climate applications.
- Available in standard board sizes, in thickness up to 100 mm (4 inches).
- Available in flat sheet form.

SUSTAINABILITY CRITERIA

- Contains recycled content and can contribute to LEED Material and Resources Credit 4 – Recycled Content.
- Manufactured in Edmonton and Vancouver, Canada and may contribute to LEED Material and Resources Credit 5 – Regional Materials.
- Contains no CFC or HCFC gasses; does not contribute to ozone depletion.
- Non-toxic; does not irritate skin on exposure.
- Biologically inert and will not support mould, mildew or fungus growth or pests.

APPLICABLE STANDARDS, RELATED REFERENCES

- ASTM C578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- 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 D1622 – Standard Test Method for Apparent Density 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.
- ASTM C203 – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation.

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PRODUCT DESCRIPTION

QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS

Performance tests certified by Intertek Testing Services Ltd.

PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS

Panels must be protected from damage during transit.

Panels must be protected from UV degradation during storage and after erection.

Do not expose to volatile hydrocarbons, such as fuel oils, gasoline, and alcohols.

LIMITATIONS

Degrades with lengthy exposure to ultra-violet rays.

Product will burn when exposed to large continuous flame.

Anhydrous acids may attack expanded polystyrene.

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 thickness and configuration, and relative size of building.

Consult manufacturer for specific product costs or relative costs.

PRODUCT PROPERTIES

Technical Properties

Rigid, closed cell, high strength expanded polystyrene (EPS) board with two layers of poly-woven laminate, to ASTM C578 Type IX, and exceeds CAN/ULC S701 Type 3.

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PHYSICAL PROPERTY	METRIC	IMPERIAL
Compressive Strength at 10% def. (ASTM D1621)	210 kpa (min)	30 psi (min)
Thermal Resistance (ASTM C578)	RSI .75 @ 24°C	R 4.3 @ 75°F
	RSI .88 @ -10°C	R 5 @ 15°F
Flexural Strength	370 kpa (min)	56 psi (min)
Water Vapour Permeance (ASTM E96)	2.5 ng/Pa.s.m ² (max)	0.04 perm (max)
Water Absorption (ASTM D2842)	1% maximum	1% maximum
Dimensional Stability	1% maximum	1% maximum

ACCESSORIES

Adhesives and/or insulation fasteners.

DIMENSIONS

Thickness: Any thickness up to 100 mm (4 inches).

1220 x 2440 mm (4' x 8') panels.

Profiles: Square edges.

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.

Seams must be taped for vapour barrier performance.

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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PRODUCT DESCRIPTION

Corporate Identification

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Technical Services Available

Phone toll free or e-mail

Classification and Filing

Omni Class Table 23 - Products
23-20 50 24 11 11 11 Expanded Polystyrene Slab and Board Thermal Insulation

Master Format 2011:
07 21 13 – Board Insulation

Master Format 1995:
07212 – Board Insulation

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