

Product Name

TERRAFOAM® PLATINUM® INSULATION WITH GRAPHITE

Associated Specification Section

MasterFormat 2011 # 07 21 13

Manufacturer's Name

Beaver Plastics

February 20, 2012

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PRODUCT DESCRIPTION**PRODUCT FEATURES****● DESCRIPTION**

- Closed cell expanded polystyrene (EPS) insulation with graphite.

● USES

- Below grade applications:
 - Perimeter insulation for grade beams and foundation walls.
 - Insulation under concrete slabs and crawlspaces.
 - Frost protected shallow foundations.
 - Ice arenas and snow melt systems.
- Above grade applications:
 - Masonry and other cavity wall construction assemblies.
 - Roof insulation, including sloped, flat, and tapered applications.
 - Coolers, freezers, and ice arenas.

● PRODUCT ATTRIBUTES AND CHARACTERISTICS

- Excellent resistance to freeze/thaw cycles.
- Low moisture absorption.
- Contains no CFCs, HCFCs, or other refrigerant gases. Does not lose insulation value over time.
- Biologically inert. Will not support mould, 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) increases as temperature decreases.
- Can contribute to LEED Requirements for low-emitting materials (confirm with LEED requirement for Indoor Air Quality).

● SELECTION CRITERIA

- Suitable for cold climate applications, where soil is prone to heaving.

● SUSTAINABILITY CRITERIA

- Manufactured near Acheson, AB and Chilliwack, BC, Canada.
- Contains no CFC or HCFC gasses; does not contribute to ozone depletion or global warming (contains only air).
- Non-toxic; does not irritate skin.

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PRODUCT DESCRIPTION

- Waste Management and Disposal:
 - Jobsite Ready Sizing: Terrafoam Platinum is readily available in any sheet size, usually at no extra cost, reducing the amount of jobsite labour and waste that would normally end up in landfill.
 - Jobsite Scrap Return: Beaver Plastics accepts Terrafoam Platinum scrap delivered to plant. Scrap materials are recycled into other polystyrene products including soil amendment and top dressing for forestry seedling production and plant propagation.
 - “Ship Naked”: Terrafoam Platinum can be supplied without full wrap. Polyethylene wrapping is often not necessary, for example, when insulation is to be used below grade or under slab resulting in less waste that would end up in landfill.
- APPLICABLE STANDARDS, RELATED REFERENCES
 - ASTM C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions.
 - ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials. Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
 - ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
 - ASTM D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
 - ASTM D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics.
 - CAN/ULC-S701 – Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
 - UL 723 – Tests for Surface Burning Characteristics of Building Materials.
- QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS
 - Performance tests certified by Intertek Testing Services Ltd.
 - ISO 9001:2000 Registered Company (Quality Certification Bureau #94-41).
- PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS
 - Must be protected from damage during transit.
 - Must be protected from UV degradation during storage and after erection.
 - Do not expose to volatile hydrocarbons, such as fuel oils, gasoline, alcohols.
- LIMITATIONS
 - Slowly degrades after lengthy exposure to direct or reflected ultra-violet rays.
 - Excessive heat build up can damage insulation.
 - 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

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PRODUCT DESCRIPTION

- Available direct from Beaver Plastics or appointed distributors
- **COST**
 - Varies with substrate condition and configuration, and relative size of building.
 - Consult manufacturer or distributors for specific product costs or relative costs.

PRODUCT PROPERTIES

- **MATERIALS, COMPOSITION, PROPERTIES**
 - Thermal Insulation Values

Type & Compressive Strength	RSI and R-Values at Various Temperatures For 25 mm Thickness				CAN/ULC S701 Requirements	
	Terrafoam Platinum 1000 70 kPa – (10 psi)	0.79 @ 24°C (4.48 @ 75°F)	0.83 @ 10°C (4.72 @ 50°F)	0.85 @ 5°C (4.83 @ 40°F)	0.88 @ -5°C (5.01 @ 23°F)	Type 1
Terrafoam Platinum 1600 110 kPa – (16 psi)	0.80 @ 24°C (4.53 @ 75°F)	0.84 @ 10°C (4.78 @ 50°F)	0.86 @ 5°C (4.88 @ 40°F)	0.89 @ -5°C (5.06 @ 23°F)	Type 2	0.70 @ 24°C (3.97 @ 75°F)
Terrafoam Platinum 2000 140 kPa – (20 psi)	0.81 @ 24°C (4.59 @ 75°F)	0.85 @ 10°C (4.81 @ 50°F)	0.87 @ 5°C (4.90 @ 40°F)	0.89 @ -5°C (5.07 @ 23°F)	Type 3	0.74 @ 24°C (4.20 @ 75°F)
Terrafoam Platinum 3000 210 kPa – (30 psi)	0.83 @ 24°C (4.69 @ 75°F)	0.86 @ 10°C (4.91 @ 50°F)	0.88 @ 5°C (5.01 @ 40°F)	0.91 @ -5°C (5.18 @ 23°F)	Type 4	0.86 @ 24°C (4.96 @ 75°F)

- Technical Properties

PHYSICAL PROPERTY	TERRAFOAM PLATINUM 1000	TERRAFOAM PLATINUM 1600	TERRAFOAM PLATINUM 2000	TERRAFOAM PLATINUM® 3000
Flexural Strength (min) (kPa) ASTM C203	170	240	300	350
Water Vapour Permeance (max) (ng/Pa.s.m²) ASTM E96M	300	200	130	130
Water Absorption (max) (% by volume)	6	4	2	1.9

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PRODUCT DESCRIPTION

ASTM C272				
Dimensional Stability (max) (% linear change)	1.5	1.5	1.5	1.5
Limiting Oxygen Index (min) (%)	24	24	24	24
Fire Performance (max) ASTM E84	Flame Spread: 25 Smoke Developed: 450	Flame Spread: 25 Smoke Developed: 450	Flame Spread: 25 Smoke Developed: 450	Flame Spread: 25 Smoke Developed: 450

- **ACCESSORIES**

- Adhesives, insulation fasteners.

- **DIMENSIONS**

- Thickness: Any thickness from 12 mm to 762 mm (1/2" – 30"), square edges are standard.
- Standard board sizes:
 - 610 x 2440 mm (2' x 8') panels.
 - 1220 x 2440 mm (4' x 8') panels.
- Profiles: Shiplap edges, drainage or furring slots and other custom profiles can be provided at nominal cost.

PRODUCT PLACEMENT

- **INSTALLATION**

- Install products in accordance with the manufacturer's instructions for each specific application.
- Cover exposed insulation with a finish acceptable to local building authorities.

- **MAINTENANCE INSTRUCTIONS AND PROCEDURES**

- Product incompatible with aromatic, aliphatic hydrocarbons, esters, amines, or anhydrous acids, which could cause degradation.

Corporate Identification

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Technical Services Available

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PRODUCT DESCRIPTION

Phone toll free or e-mail

Classification and Filing

UniFormat 2010

A2010	Walls for Subgrade Enclosures
A2010.90	Subgrade Enclosure Wall Supplementary Components
A4090.10	Perimeter Insulation
B1010	Floor Construction
B1010.90	Floor Construction Supplementary Components
B1020	Roof Construction
B1020.90	Roof Construction Supplementary Components
B2010	Exterior Walls
B2010.10	Exterior Wall Veneer
B2010.20	Exterior Wall Construction
B2010.40	Fabricated Exterior Wall Assemblies
B2010.80	Exterior Wall Supplementary Components
B3010	Roofing
B3010.10	Steep Slope Roofing
B3010.50	Low-Slope Roofing
B3010.90	Roofing Supplementary Components
B3040	Traffic Bearing Horizontal Enclosures
B3040.30	Horizontal Waterproofing Membrane
B3040.90	Horizontal Enclosure Supplementary Components
B3080	Overhead Exterior Enclosures

OmniClass 2010 Table 23 - Products

23-13 25 19	Thermal Insulation
23-13 25 19 11	Slab and Board Thermal Insulation
23-13 25 19 11 11	Polystyrene Slab and Board Thermal Insulation
23-13 25 19 11 11 11	Expanded Polystyrene Slab and Board Thermal Insulation
23-13 39 31	Roof Membranes
23-35 20 21 11	Single Layer Roof Membranes
23-35 20 21 13	Multi Layer Roof Membranes
23-19 31 19 13	Insulated Rooms
23-19 31 19 13 11	Cold Storage Rooms

MasterFormat 2011:

07 21 13	– Board Insulation
07 21 13.13	– Foam Board Insulation
07 22 00	– Roof and Deck Insulation
07 24 00	– Exterior Insulation and Finish Systems
07 50 00	– Membrane Roofing
07 51 00	– Built-Up Roofing
07 52 00	– Modified Bituminous Membrane Roofing

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PRODUCT DESCRIPTION

- 07 53 00 – Elastomeric Membrane Roofing
- 07 54 00 – Thermoplastic Membrane Roofing
- 07 55 00 – Protected Membrane Roofing
- 07 55 63 – Vegetated Protected Membrane Roofing

MasterFormat 1995:

07213 – Board Insulation

END