

Product Name

LOGIX™

Associated Specification Section

MasterFormat 1995 # 03117

MasterFormat 2004 # 03 11 25

Manufacturer's Name

Beaver Plastics

Sept 30, 2004

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PRODUCT DESCRIPTION

PRODUCT FEATURES

- BASIC USES / RELATED USES
 - LOGIX Insulated Concrete Forms are stackable, interlocking expanded polystyrene (EPS) blocks that serve as permanent formwork to create solid reinforced concrete walls that are pre-insulated, for use above and below grade.
 - Residential, commercial, institutional, and industrial buildings where combustible construction is permitted.
 - Exterior and interior walls, lintel beams, foundations and retaining walls.

- PRODUCT ATTRIBUTES AND CHARACTERISTICS
 - Modular interlocking, stackable blocks or “forms” that are vertically reinforced with steel and filled with concrete.
 - Forms remain in place to provide insulation, vapor barrier and attachment surface for wall finishes.
 - Excellent insulation values, thermal mass and structural strength.
 - Superior sound insulation (up to STC 50).
 - Nominal wall thickness of 70 mm (2 3/4") to a total insulation thickness of 140 mm (5 1/2") in all form sizes:
 - Greater insulating value.
 - Greater strength during handling and concrete placement.
 - Less distortion.
 - Permits standard rough-in sizing for electrical and plumbing installations.
 - Plastic connector webs are made from recycled plastic:
 - Create positive connection between interior and exterior EPS boards.
 - Maintains EPS board facings at a fixed clear distance.
 - Provides attachment surface for finishes.
 - Holds rebar in place, eliminates need for tying.
 - Contains no CFCs, HCFCs, or other refrigerant gases.
 - EPS is 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.

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PRODUCT DESCRIPTION

- **SELECTION CRITERIA**
 - Full form and half form panels.
 - Fixed clear distance between EPS board facings: 102 mm (4"), 159 mm (6 1/4") , 203 mm (8") or 254 mm (10").
 - Special form units include corners, transitions, and ledges.
 - Webs will accept up to #6 rebar.
 - Can be used where combustible construction is permitted.

- **APPLICABLE STANDARDS, RELATED REFERENCES**
 - ASTM C578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - ASTM D1761 - Standard Test Methods for Mechanical Fasteners in Wood
 - ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
 - ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials
 - CAN/ULC-S101 - Standard Methods of Fire Endurance Tests of Building Construction and Materials
 - CAN/ULC-S701 – Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.

- **QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS**
 - ISO 9001:2000 Registered Company (Quality Certification Bureau #94-41).
 - Testing and ongoing evaluations conducted by Intertek Testing Services NA, Ltd. - Warnock Hersey (AA-647-2).
 - Fire Rating:
 - 3 hours, to ASTM E119 and CAN/ULC-S101,
 - 4 hours to (BOCA) National Building Code and International Code.
 - Flame Spread/Smoke Developed less than 25/450 to ASTM E84, UL 723, UBC 8-1.
 - Polypropylene web material: To CC1 Requirements for plastic materials, to ASTM D 1929, D635 and D2843.
 - Fastener Withdrawal Resistance and Lateral Resistance to ASTM D1761.
 - Thermal Resistance to ASHRAE Fundamentals Handbook 2001.
 - Room Fire Test Standard for Interior Plastic Systems and Fire Endurance Test to UBC 26-3.
 - Code Evaluation Reports received:
 - ICC Evaluation Service #ER-6133 and #NER-679

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- Canadian Construction Materials Centre: Evaluation 13110-R
- State of Wisconsin #200266-1
- City of Los Angeles Research Report #RR-25518
- BOCA code compliance:
 - 1999 National Building Code (NBC)
 - 1999 Standard Building Code (SBC)
 - 1997 Uniform Building Code™ (UBC).
 - 2000 International Building Code® (IBC).
 - 2000 International Residential Code® (IRC).
- **PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS**
 - LOGIX forms must be protected from damage during transit.
 - LOGIX forms must be protected from UV degradation during storage and after erection.
- **LIMITATIONS**
 - Building codes require strict compliance for the use of foam plastics in building construction. Forms must be protected on the interior and exterior of a building with thermal barriers and cladding complying with applicable building codes.
 - 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 and appointed LOGIX ICF Distributors.
- **COST**
 - Varies with substrate condition and configuration, and relative size of building.
 - Consult manufacturer national or regional offices for specific product costs or relative costs.

PRODUCT PROPERTIES

- **MATERIALS, COMPOSITION, PROPERTIES**

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PRODUCT DESCRIPTION

- Material: Rigid closed cell, expanded polystyrene (EPS) board, Type 2, to ASTM C578.
 - Density: 23 kg/m³ (1.45 pcf) nominal.
 - Flame Spread / Smoke Developed Index: Less than 25/450 to ASTM E84.
 - Overall thermal resistance of 4.23 RSI (R-24).
 - Overall fire resistance rating: 3 hours to ASTM E119 and CAN/ULC-S101
- ACCESSORIES
 - Connector webs: Polypropylene.
 - Accessory forms: 90° corners for unit, 45° corners for unit, tapered top, end cap, height adjuster and brick ledge.
 - Fasteners for finishing materials:
 - Coarse thread self-tapping screws.
 - Corrosion resistant.
 - Sufficient length to penetrate embedded polypropylene strip 6 mm (1/4").
 - Type W screw: maximum allowable withdrawal load of 147 N (33 pounds).
 - Type S screw: maximum allowable withdrawal load of 156 N (35 pounds).
- DIMENSIONS
 - Standard form panel sizes: 400 x 1220 x nominal 70 mm (16" x 48" x 2 3/4").
 - Available cavity widths: 100 mm, 150 mm, 200 mm, and 250 mm (4", 6", 8", and 10").
 - Standard half form panel sizes: 200 x 1220 x nominal 70 mm (8" x 48" x 2 3/4").
 - Available cavity widths: 100 mm, 150 mm, and 200 mm, and 250 mm (4", 6", 8" and 10").
 - Connector webs: Sized to suit cavity widths.
- SHOP FABRICATION AND ASSEMBLY
 - Full forms, half forms and special shapes are moulded EPS blocks held together by injection moulded polypropylene webs, which are pre-inserted in the EPS mould before moulding to partially imbed them into the EPS.
 - Webs are spaced at 200 mm (8") on centre.

PRODUCT PLACEMENT

- PREPARATION

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PRODUCT DESCRIPTION

- Prepare jobsite. Footings must be straight, flat and level within a tolerance of +/- 6 mm (1/4") and must meet local codes.
- Use chalk lines to snap wall layouts onto footings.
- Obtain approval of below grade dampproofing and waterproofing by manufacturer of insulated concrete forms.
- **INSTALLATION**
 - Install to manufacturer's published instructions and ICC Evaluation Service Inc. report NER-679.
 - Place first course, beginning with corner form. Place horizontal reinforcement in first course. Start subsequent courses at same corner.
 - After second course, check level and square, spot trimming the bottom of the first course at high spots. Glue down to footing using low-expansion foam.
 - Connector webs:
 - Spaced at 200 mm (8") on centre.
 - Embedded 13 mm (1/2") below outside surface of EPS board, providing attachment points for finishing materials.
 - Place horizontal reinforcement in web slots and install form lock. Install vertical steel reinforcement after all courses and horizontal reinforcement has been placed.
 - Install window and door bucks, and service penetrations.
 - Install lateral support as wall progresses to align walls.
 - Place concrete in lift heights according to code.
 - Install rough electrical, making wire depths in accordance with electrical codes.
 - Make plumbing channels.
 - Apply interior and exterior finishes, using materials and fasteners to local building codes.

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PRODUCT DESCRIPTION

Corporate Identification

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Technical Services Available

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Classification and Filing

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