Product Name
INSUL-WALL
Associated Specification Section
MasterFormat 1995 # 07212
MasterFormat 2004 # 07 21 13
Manufacturer's Name
Beaver Plastics

PRODUCT DESCRIPTION

PRODUCT FEATURES

- BASIC USES / RELATED USES
  - Pre-formed expanded polystyrene (EPS) panels designed to integrate with wood framing members to provide a prefabricated wall panel system in buildings allowing combustible construction.
- PRODUCT ATTRIBUTES AND CHARACTERISTICS
  - Outstanding energy conserving properties.
  - 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.
  - Panels will not sag, decay or lose it's insulation value (R-value).
  - Resists heat transfer; therefore walls are warmer and drafts are minimized.
- SELECTION CRITERIA
  - Combines conventional wood framing with highly efficient rigid insulation.
  - Eliminates the need for exterior sheathing.
  - Panels are solid, preventing in-wall convection currents.
  - Wood framing members are separated from the exterior surface of the wall by fitting into grooves on the vertical edges of the EPS panels, thereby preventing thermal bridging and heat loss through the framing.
  - INSUL-WALL is available for:
    - 38 x 89 mm (2 x 4) and 38 x 140 mm (2 x 6) wall construction;
    - Spaced at 300 mm (12"), 400 mm (16") or 600 mm (24").
  - INSUL-WALL is adaptable to any wood framing and does not require changes to conventional framing plans.
  - Walls may be pre-assembled and delivered to the site with all framing complete.

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- APPLICABLE STANDARDS, RELATED REFERENCES
  - ASTM C578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
  - ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
  - CAN/ULC-S701 – Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS
  - Thermal Resistance to:
    - ASHRAE 1993 Handbook of Fundamentals; and
    - Ortech International Engineering Report #38-10824.
  - Canadian Construction Material Centre (CCMC) evaluation Report 09589-R: complies with CCMC's Technical Guide "Prefabricated, Conventional Wood-Frame Wall Panel Systems".
  - National Building Code (NBC) of Canada 1995: Complies with Section 9.23 with respect to stud size and spacing, and Section 9.25 with respect to insulation material and installation.
  - Canada Mortgage and Housing Corporation (CMHC): Permits use of this product in construction financed and insured under the National Housing Act.
  - Certified by Intertek Testing Services NA Ltd. for EPS Type 1 and Type 2
  - Certified under Warnock Hershey Third Party Certification Program.
  - ISO 9001:2000 Registered Company (Quality Certification Bureau #94-41).
- PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS
  - Insul-Wall must be protected from damage during transit.
- LIMITATIONS
  - Will burn when exposed to large continuous flame.
  - Permitted for use in wood frame construction subject to meet the following NBC 1995 requirements:
    - Building is permitted to be of combustible construction.
    - Design of load bearing walls meets structural requirements of NBC.
    - Interior finishes and exterior cladding meet the requirements of NBC.
    - Insulation system does not negate the NBC requirements for and air and vapour barrier.
    - Proper fire stopping in exterior wall air spaces.
    - Insulation must be protected from mechanical damage.

PRODUCT DESCRIPTION

- EPS must be properly shielded from heat sources.

- SAFETY PRECAUTIONS
  - Normal fire precautions and good housekeeping methods must be followed during storage and application.
  - Special precautions need to be taken during welding or soldering procedures near Insul-Wall panels.

- AVAILABILITY
  - Available direct from Beaver Plastics.

- COST
  - Varies with substrate condition and configuration, and relative size of building.
  - Consult manufacturer for specific product costs or relative costs.

PRODUCT PROPERTIES

- MATERIALS, COMPOSITION, PROPERTIES
  - Technical Properties
    - Rigid closed cell, expanded polystyrene (EPS) board, Type 1, to ASTM C578.
    - Flame Spread Index/ Smoke Developed Index: Less than 25/450 to ASTM E84.
    - Compressive Strength: 70 kPa (10 psi).
    - Thermal resistance: 3.5 RSI (R-20) to 5.2 RSI (R-30).

- DIMENSIONS
  - Standard panel size: 2370 mm (96") high x 400 mm (16") wide.
    - Additional widths: 300 mm (12") and 600 mm (24").
  - Thickness: 127 mm (5") to 176 mm (7").
  - Panels may be custom sized.

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PRODUCT PLACEMENT

- INSTALLATION
  - EPS panels form the core in a conventional wood-framing system.
  - Walls may be pre-assembled to customer specifications and delivered to the construction site.
  - Panel's vertical edges are grooved to fit around studs and to allow joining and interlocking with adjacent panels. 1 x 4 strapping is fastened through the insulation from the exterior, into the wood studs.
  - Cladding system is secured at the strapping locations.

Corporate Identification
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Classification and Filing
MasterFormat 2004:
07 21 13 – Board Insulation

MasterFormat 1995:
07212 – Board Insulation

UniFormat 1998:
B2010 – Exterior Walls

END