Product Name
EnvaTherm® Insulated Backpans
OmniClass 23-13 33 27 11 11 15
Associated Specification Section
MasterFormat 08 44 13.21
Manufacturer's Name
Lenmak Exterior Innovations Inc.

PRODUCT DESCRIPTION

PRODUCT FEATURES

- DESCRIPTION
  - Insulated metal back panel, for use in curtain walls
  - Online technical information available at: http://www.lenmak.com
- BASIC USES
  - Insulated curtain wall opaque infill panels.
- PRODUCT ATTRIBUTES AND CHARACTERISTICS
  - Acceptable as a component of both combustible and non-combustible construction.
  - Low potential for vertical fire spread (CAN/ULC S134 - Standard Method of Fire Test of Exterior Curtain Wall Assemblies).
  - Competitive lead times, due to fabricating automation and lean manufacturing processes.
  - Foam insulation material is an air barrier material, which adheres to inside panel faces. Can be an integral part of an air barrier system.
  - No air movement within panel cavity, resulting in increased thermal performance compared to pans with batt insulation.
  - Foam bonds to pan metal substrate. No insulation stick pins required, therefore no heat loss from thermal bridging at stick pins and no risk of delamination.
  - 50% lighter than mineral wool or fibreglass insulated panels.
  - Multiple units can be sealed together on site or at the fabrication facility to form one sealed unit.
  - Self-sealing foam prevents transfer of drumming noise due to limiting/prevention of pressure imbalance due to heat variance within and outside wall assembly.
- SUSTAINABILITY CRITERIA
  - Factory foamed panels eliminate on-site waste of insulation material.
  - Foam does not support growth of mold or allergens.
  - Foam is 100% water blown, PBDE-free. No synthetic blowing agents or ozone depleting substances.
  - Recycled Content:
    - Steel: 30% minimum (24% post-consumer and 6.8% post-industrial)
    - Aluminum: Combination of pre-and post-consumer recycled material (ratio varies; inquire with Lenmak for details).

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- APPLICABLE STANDARDS, RELATED REFERENCES
  - ASTM A653 / A653M-13 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
  - ASTM A792 / A792M-10 Standard Specification for Steel Sheet, 55 % Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
  - ASTM B209-14 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
  - ASTM C794-10 Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
  - ASTM C1136 -12 Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation
  - ASTM C1338-14 Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings
  - ASTM C1363-11 Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus
  - ASTM C1622-03 Standard Test Method for Apparent Density of Rigid Cellular Plastics
  - ASTM E2178-13 Standard Test Method for Air Permeance of Building Materials
  - CAN/ULC S134-13 Standard Method of Fire Test of Exterior Wall Assemblies
- PERFORMANCE CRITERIA
  - Meets the requirements of sentence 3.1.4.2, 3.2.3.8, 3.1.5.5, and 3.1.5.12 of the National Building Code of Canada 2010.
- QUALITY STATEMENT, TESTS, CERTIFICATIONS, AND APPROVALS
  - Intertek Design Listing LIE/IMWP 25-01
  - National Research Council Report A1-001968.1: Full Scale Exterior Wall Test on EnvaTherm Backpans
- PACKAGING, HANDLING, PROTECTION, AND DELIVERY INSTRUCTIONS
  - Packaged on skids or crates.
- LIMITATIONS
  - Pre-finished post-formed metal panel assemblies may exhibit certain behaviors common to all fabricators. Panel surfaces may display a slight convex effect (pillowing) due to panel stresses during manufacture, fabrication, or installation. Metal forming during panel fabrication may result fine cracks in finishes (crazing) at outer edges or bends. Excessive effects are a deficiency; mild "pillowing" or "crazing" are not deficiencies.
- AVAILABILITY
  - Directly from Lenmak Exterior Innovations Inc.

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- COST
  - Consult Lenmak Exterior Innovations Inc. for specific product costs or relative costs.

PRODUCT PROPERTIES

- MATERIALS
  - Panels:
    - Steel: Galvanized or Galvalume, 0.61 mm (24 ga.) thick
      - Galvalume: AZ150 (AZ50) to ASTM A792/A792M
    - Aluminum: 3003, 5052, or 5005-H32, to ASTM B209, 1.27 mm (0.05 inch) thick
  - Insulation: Pour applied light density open-cell polyurethane foam
    - Density: 8 kg/m³ (0.5 lb/ft³) nominal
    - Thermal Resistance: RSI 0.76 per 25.4 mm @ 24°C, to ASTM C518
    - Vapour Permeability: 610.3 ng/Pa.s.m² @ 25.4 mm thickness to ASTM E96
    - Flame Spread to CAN/ULC S102 (S127): 450
    - VOC Emissions to CAN/ULC-S774: Pass
  - Foil-Backed Sheet Material: Aluminum, ASTM C1136, Type II or IV
- SIZES
  - Sizes available to suit project site wall dimensions
  - Available in various depths up to 150 mm (6 inches)
- ACCESSORIES
  - Sealant: Polyurethane type
  - Fasteners: Self-tapping screws
  - Foil tape
- SHOP FABRICATION AND ASSEMBLY
  - Insulation fills entire void within panel.
  - Insulation covered with perforated foil-faced scrim paper, foil-side out.
  - Oversized multi-unit panels with factory punched rivet holes on joining flange.
- FINISH
  - Steel: Galvalume
  - Aluminum: Anodized or factory-painted

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PRODUCT PLACEMENT

- INSTALLATION – TYPICAL PANEL PROFILE
  - Install back panels with foil faces toward exterior, flush with outermost edge of curtain wall framing member. Fasten back panel to curtain wall frame at perimeter of panel using self-tapping screws.
  - Apply foil tape over exposed screw heads.
  - Apply sealant around the outside perimeter of each back panel, sealing it to the frame.
  - Seal multiple-back panel units by joining and sealing:
    - Before joining, install glazing tape along all seams and apply sealant where necessary to prevent water penetration.
    - After joining, fasten screws along joining flange as required.
  - For custom back panel profiles, contact Lenmak for additional installation requirements to suit the specific conditions of the assembly.
- WASTE RECYCLING
  - No waste generated on site.

Corporate Identification

Lenmak Exterior Innovations Inc.
10404 - 176 Street NW
Edmonton, AB Canada
T5S 1L3
Tel: 780.451.5482 or 888.451.5482
Fax: 780.451.0865 or 888.451.0865

http://www.lenmak.com
orderdesk@lenmak.com

Classification and Filing

MasterFormat 2014:
08 44 13.21 – Glazed Aluminum Curtain Wall Back Pans
OmniClass:
23-13 33 27 11 11 15 – Curtain Wall Infill Panels
UniFormat:
B2010.40 - Fabricated Exterior Wall Assemblies

END