

7.7 – QAI LISTING REPORT

Quality Auditing Institute

Listing Book

BUILDING PRODUCTS LISTING PROGRAM

Class: Insulation

Customer: LOGIX Insulated Concrete Forms, Ltd.
 Location: 199-1917 West 4th Avenue, Vancouver, BC V6J 1M7

Listing No. B1031
 Effective Date: September 27, 2010
 Last Revised: October 15, 2010
 Expires: N/A

Product: Insulated Concrete Forms (ICFs) with expanded polystyrene (EPS) panels and polypropylene web tie connectors.

Bead Types: Only approved bead types meeting certification requirements

Label: Product units are marked with the following: Manufacturer's Name, Trademark or other recognized symbol of identification, Model Designation, Month and Year of Manufacture or equivalent, QAI logo with the "US" and "C" identifier, listing number, and the standard numbers and ratings.

Standard: ASTM E84 - "Standard Test Method for Surface Burning Characteristics of Building Materials"

| Ratings: | Component | Product Density | Maximum Thickness | Flame Spread Index (FSI) | Smoke Developed Index (SDI) |
|----------|------------|-----------------|-------------------|--------------------------|-----------------------------|
| | EPS Panels | 1.35 pcf | 2.75 inches | 25 | 450 |

Standards: ASTM C578 - "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation";

CAN/ULC S701 – "Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering"

| | Component | EPS Classification |
|-----------------------|------------|--------------------|
| ASTM C578 Ratings: | EPS Panels | Type II |
| CAN/ULC S701 Ratings: | EPS Panels | Type 2 |

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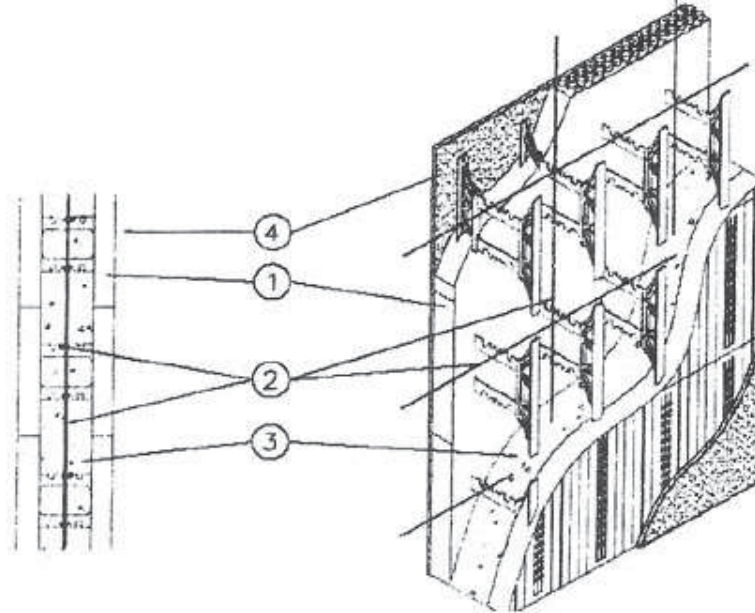
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Standards: ASTM E119 - "Standard Test Methods for Fire Tests of Building Construction and Materials";

CAN/ULC S101 – "Standard Methods of Fire Endurance Tests of Building Construction and Materials"

| | Rating | Product Density | Maximum Cavity Width | Maximum Panel Thickness |
|--------------|--------|-----------------|----------------------|-------------------------|
| ASTM E119 / | 2-Hour | 1.35 pcf | 4 inches | 2 3/4 inches |
| CAN/ULC S701 | 3-Hour | 1.35 pcf | 6 1/8 inches | 2 3/4 inches |
| Ratings: | 4-Hour | 1.35 pcf | 8 inches | 2 3/4 inches |

Structural Rating at above durations for concrete wall at structural design load.



Assembly Details:

1. Insulated Concrete Forms – Standard forms made of two 16" x 48" by 2.75" thick expanded polystyrene (EPS) block panels connected by polypropylene detail webs at 8" O.C. The minimum width of the cavity is 4" as shown in the ratings table above (rating depends on cavity thickness).
2. Reinforcing Steel - No. 4 steel reinforcing bars placed horizontally in each course and vertically at 16" O.C. along centerline of wall cavity thickness.
3. Sand-Limestone Concrete – 145 +/- 5 pcf density, 2900 psi nominal compressive strength concrete.
4. Gypsum Wallboard – Min. 1/2" thick, 1.5 psf minimum density, 48" wide gypsum wallboard fastened to flanges of polypropylene webs with 2" long drywall screws at 16" horizontally and vertically. Joints covered with joint compound, covered with joint tape, and covered with an additional coat of joint compound. Screw heads covered with joint compound.

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Standard: ASTM D1761 - "Standard Test Methods for Mechanical Fasteners in Wood"

| | | |
|------------|------------|--|
| | Component | Allowable cladding pressures (based on fastener withdrawal values) |
| ASTM D1761 | ICF System | As per tables below |

ASTM D1761 Allowable fastener values (psf) per fastener spacings for LOGIX ICFs:

| Fastener Type | Fastener Length | Withdrawal Resistance with Factor of Safety of 3.0 | 8" Hor. | 8" Hor. | 16" Hor. / |
|-------------------------|-----------------|--|-------------|-------------|------------|
| | | | / 12" Vert. | / 16" Vert. | 16" Vert. |
| #6 Coarse Drywall Screw | 1 5/8 in. | 59 lbs | 88.5 | 66.4 | 33.2 |
| #6 Fine Drywall Screw | 1 5/8 in. | 57 lbs | 86.0 | 64.5 | 32.3 |
| 16 gauge staple | 1 1/2 in. | 9 lbs | 14.0 | 10.5 | 5.3 |
| #8 Wood Screw | 2 in. | 69 lbs | 103.5 | 77.6 | 38.8 |
| #8 Exterior Deck Screw | 2 in. | 70 lbs | 105.0 | 78.8 | 39.4 |
| #10 Wood Screw | 2 in. | 66 lbs | 99.0 | 74.3 | 37.1 |

ASTM D1761 Allowable fastener values (kPa) per fastener spacings for LOGIX ICFs:

| Fastener Type | Fastener Length | Withdrawal Resistance with Factor of Safety of 3.0 | 200mm Hor. / | 200 mm Hor. / | 400 mm Hor. / |
|-------------------------|-----------------|--|--------------|---------------|---------------|
| | | | 305 mm Vert. | 400 mm Vert. | 400 mm Vert. |
| #6 Coarse Drywall Screw | 41.3 mm | 26.8 kg | 4.24 | 3.18 | 1.59 |
| #6 Fine Drywall Screw | 41.3 mm | 26.0 kg | 4.12 | 3.09 | 1.54 |
| 16 gauge staple | 38.1 mm | 4.2 kg | 0.67 | 0.50 | 0.25 |
| #8 Wood Screw | 50.8 mm | 31.3 kg | 4.96 | 3.72 | 1.86 |
| #8 Exterior Deck Screw | 50.8 mm | 31.8 kg | 5.03 | 3.77 | 1.89 |
| #10 Wood Screw | 50.8 mm | 29.9 kg | 4.74 | 3.56 | 1.78 |

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Standards: ASTM D635 - "Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position"; ASTM D1929 – "Standard Test Method for Determining Ignition Temperature of Plastics"

| | Component | Rating |
|------------|------------------------|-------------------------|
| ASTM D635 | Polypropylene Web Ties | HB (Horizontal Burning) |
| ASTM D1929 | Polypropylene Web Ties | Pass |

Notes: Also meets Florida Building Code (FBC) High Velocity Hurricane Zone (HVHZ) requirements as per Chapter 26 of the FBC.

These products are subjected to limitations as specified above and must be installed in accordance with the manufacturers' instructions. Authorities having jurisdiction should be consulted regarding allowable applications. See manufacturer's listings for other standards listed under QAI certification programs.

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