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# ICC-ES Legacy Report

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## ER-5999

Reissued 11/2018

This report is subject to renewal 11/2019.

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**

**SECTION: 07 21 00—THERMAL INSULATION**

**REPORT HOLDER:**

**MANSONVILLE PLASTICS (BC) LTD.**

**EVALUATION SUBJECT:**

**KOROLITE™ TYPES I AND II EXPANDED POLYSTYRENE INSULATION BOARDS**



*“2014 Recipient of Prestigious Western States Seismic Policy Council (WSSPC) Award in Excellence”*



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A Subsidiary of the International Code Council®

Legacy report on the 1997 *Uniform Building Code*™, the 2000 *International Building Code*® and the 2000 *International Residential Code*®

## DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

### Section: 07 21 00—Thermal Insulation

#### MANSONVILLE PLASTICS (BC) LTD.

#### 1.0 SUBJECT

Korolite™ Types I and II Expanded Polystyrene Insulation Boards.

#### 2.0 DESCRIPTION

##### 2.1 General:

Korolite™ insulation boards are expanded polystyrene foam plastic boards designed for use as nonstructural thermal insulation sheathing. The boards are available in various sizes and in thicknesses up to 6 inches (152 mm), with square or tongue-and-groove edges. The expanded polystyrene insulation boards are Type I or Type II boards complying with ASTM C 578-95, with nominal densities of 1.0 pcf (16 kg/m<sup>3</sup>) and 1.5 pcf (24 kg/m<sup>3</sup>), respectively. Thermal resistance (R-Value) for the two densities is shown in Table 1. All boards have a flame-spread index of 25 or less, and a smoke-density of 450 or less, when tested in accordance with UBC Standard 8-1 or ASTM E 84.

##### 2.2 Uses:

The insulation is for use in wall cavities assemblies, or on the exterior side of exterior walls. The interior of the building must be separated from the insulation boards with a thermal barrier as required in Section 2602.4 of the 1997 *Uniform Building Code*™ (UBC), Section 2603.4 of the 2000 *International Building Code*® (IBC), and Section R318.1.2 of the 2000 *International Residential Code*® (IRC). A vapor barrier may be required by the building official for installations regulated by the UBC. A vapor retarder is required in accordance with Section 1403.3 of the IBC or Section R322 of the IRC. Maximum 1½-inch-thick (38 mm) insulation board may be applied to exterior faces of exterior walls, framing or surfaces. The attachment of finish materials over the insulation board must provide a minimum 1-inch (25.4 mm) penetration of the fasteners into wood framing. Exterior wall covering over the insulation must be structurally adequate to resist the required horizontal forces perpendicular to the wall. All walls must be braced in accordance with Section 2320.11.3 or 2320.11.4 of the UBC, Section 2308.9.3 of the IBC or Section R602.10 of the IRC, as applicable.

Insulation boards must not be used as a nailing base for exterior siding materials. All nailing must be made through the sheathing into the wall framing or structural sheathing as required by the siding manufacturer's instructions or the applicable code.

#### 2.3 Identification:

Labeling of the insulation boards is not recognized in this report, since the products are not currently manufactured.

2.4 The report holder's contact information is the following:

**MANSONVILLE PLASTICS (BC) LTD.**  
19402 - 56<sup>TH</sup> AVENUE  
SURREY, BRITISH COLUMBIA V3S 6K4  
CANADA

#### 3.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Interim Criteria for Foam Plastic Insulation (AC12), dated July 2002, and a quality control manual.

#### 4.0 FINDINGS

That the Korolite™ expanded polystyrene insulation boards described in this report comply with the 1997 *Uniform Building Code*™ (UBC), the 2000 *International Building Code*® (IBC), and the 2000 *International Residential Code*® (IRC), subject to the following conditions:

- 4.1 Installation complies with this report and the manufacturer's instructions.
- 4.2 The insulation board is covered with an approved exterior wall covering, including a weather-resistive barrier complying with UBC Section 1402.1, IBC Section 1404.2 or IRC Section R703.2.
- 4.3 The exterior wall covering spanning between wall framing members provides the necessary structural resistance to wind and seismic forces.
- 4.4 The exterior walls are braced in accordance with Section 2.2 of this evaluation report.
- 4.5 The foam plastic insulation board is separated from the interior of the building with a thermal barrier complying with Section 2602.4 of the UBC, Section 2603.4 of the IBC, and Section R318.1.2 of the IRC.

- 4.6 A vapor barrier or vapor retarder is installed as noted in Section 2.2 of this report.
- 4.7 For structures required to comply with the IRC, use of the foam plastic insulation in areas where the probability of termite infestation is “very heavy” is in accordance with Section R324.4 of the IRC.
- 4.8 The insulation boards are manufactured in Surrey, British Columbia, Canada, under a quality control program with inspections by ICC-ES.

TABLE 1—DENSITIES AND R-VALUES FOR BOARDS

EPS TYPE	NOMINAL DENSITY (pcf)	MINIMUM DENSITY (pcf)	MINIMUM R-VALUE FOR 1-INCH THICKNESS AT 75°F (ft.2-hr-°F/Btu)
I	1.00	0.90	3.60
II	1.50	1.35	4.00

For SI: 1 inch = 25.4 mm, 1 pcf = 16.018 kg/m<sup>3</sup>, t°F = 9/5 t°C + 32, 1 ft<sup>2</sup>-hr-°F/Btu = 0.176110m<sup>2</sup>-K/W.