

ICC-ES Evaluation Report

ESR-2360

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This report is subject to re-examination in one year.

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DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07210—Building Insulation
REPORT HOLDER:
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EVALUATION SUBJECT:
HOME FOAM®/INSULTHANE 100
1.0 EVALUATION SCOPE
Compliance with the following codes:

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2009 *International Energy Conservation Code*® (2009 IECC)
- 2006 *International Building Code*® (2006 IBC)
- 2006 *International Residential Code*® (2006 IRC)
- 2006 *International Energy Conservation Code*® (2006 IECC)

Properties evaluated:

- Surface burning characteristics
- Thermal resistance (*R*-values)
- Physical properties

2.0 USES

Home Foam®/Insulthane 100 spray-applied foam plastic insulation is used as a nonstructural thermal insulating material in buildings of Type V-B (IBC) construction, and in dwellings under the IRC. The insulation is for use in wall cavities, floor assemblies or ceiling assemblies.

3.0 DESCRIPTION
3.1 General:

Home Foam®/Insulthane 100 is a two-component, open-cell, spray-applied, semirigid, low-density, cellular polyurethane foam plastic insulation manufactured in a cream or green color. The foam plastic is fully water-blown with a nominal in-place density of 0.43 pcf (6.9 kg/m³). The

polyurethane foam plastic is produced by combining a polymeric isocyanate (Part A) and a polymeric resin (Part B) on site, during the spray application.

3.2 Surface-burning Characteristics:

The insulation, at a maximum thickness of 5½ inches (140 mm) and a nominal in-place density of 0.43 pcf (6.9 kg/m³), has a flame-spread index of 75 or less (Class B) and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84. The insulation, at a maximum thickness of 4 inches (102 mm) and a nominal in-place density of 0.43 pcf (6.9 kg/m³), has a flame-spread index of 25 or less (Class A) and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84.

3.3 Thermal Resistance (*R*-values):

The insulation has thermal resistance (*R*-value) at a mean temperature of 75°F (24°C) as shown in Table 1.

4.0 INSTALLATION
4.1 General:

Home Foam®/Insulthane 100 must be installed in accordance with the manufacturer's published installation instructions and this report. A copy of the manufacturer's published installation instructions must be available at all times on the jobsite during installation.

4.2 Application:

Home Foam®/Insulthane 100 is spray-applied on the jobsite using a twin-chamber high-pressure pump to combine the Part A and Part B components at a one-to-one ratio, as specified in the manufacturer's published installation instructions. Home Foam®/Insulthane 100 must not be applied in areas that will be exposed to a maximum ambient temperature greater than 200°F (93°C). The substrates to which the insulation is applied must be clean, dry and free of frost, ice, loose debris, or contaminants that will interfere with adhesion of the spray foam insulation. The spray foam insulation must not be applied in electrical outlet or junction boxes or in direct contact with water or soil. Ventilation of attic or crawl spaces insulated with the spray-applied foam plastic must be provided in accordance with the applicable code. The spray-applied foam insulation must be protected from weather during and after installation. The insulation must not exceed a total thickness of 5.5 inches (140 mm) when installed in wall cavities and ceiling cavities.

4.3 Thermal and Ignition Barriers:

Home Foam®/Insulthane 100 must be separated from the interior of the building by an approved thermal barrier of ½-inch-thick (12.7 mm) gypsum wallboard or an equivalent

15-minute thermal barrier complying with, and installed in accordance with, IBC Section 2603.4 or 2006 IRC Sections R314.5.3 (attics) or R314.5.4 (crawl spaces) [2009 IRC Section R316.4], as applicable. When installation is in attics and crawl spaces, where entry is made only for service of utilities, Home Foam®/Insulthane 100 must be protected against ignition in accordance with IBC Section 2603.4.1.6 or 2006 IRC Sections R314.5.3 or R314.5.4 or 2009 IRC Sections R316.5.3 or R316.5.4, as applicable.

5.0 CONDITIONS OF USE

The Home Foam®/Insulthane 100 spray-applied insulation described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The insulation must be installed in accordance with the manufacturer’s published installation instructions, this report and the applicable code. If there are any conflicts between the manufacturer’s published installation instructions and this report, this report governs.
- 5.2 The insulation is limited to interior use in Type V-B construction under the IBC, and dwellings in accordance with the IRC.
- 5.3 The thickness and density of the insulation must not exceed what is stated in Section 3.2.
- 5.4 The spray-applied foam insulation must be applied by contractors certified by Home Insulation Corporation.
- 5.5 The spray-applied foam insulation must be separated from the building interior as described in Section 4.3 of this report.
- 5.6 Jobsite certification and labeling of the insulation must comply with IRC Sections N1101.4 and N1101.4.1 and 2006 IECC Section 102 or 2009 IECC Sections 303.1.1 and 303.1.1.2, as applicable.

- 5.7 The insulation must be protected from the weather during and after application.
- 5.8 Use of insulation in areas where the probability of termite infestation is “very heavy” must be in accordance with 2006 IRC Section R320.5 or 2009 IRC Section R318.4 or IBC Section 2603.8.
- 5.9 A vapor retarder may be required by the code official in exterior walls in accordance with IBC Section 1403.2, and in exterior walls in accordance with IRC Section R601.3
- 5.10 The Part A and Part B components are produced in Brantford, Ontario, Canada, under a quality control program with inspections by Underwriters Laboratories Inc. (AA-668).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Spray-applied Foam Plastic Insulation (AC377), dated June 2009.

7.0 IDENTIFICATION

The Part A and Part B components for Home Foam®/Insulthane 100 insulation are packaged in 55-gallon (208 L) drums that carry the report holder’s name, (Home Insulation Corporation) and address; the date of manufacture or the lot number; the product name (Home Foam®/Insulthane 100); the product type (Part A or Part B); the installation instructions; the density; the flame-spread and smoke-developed indices; the thermal-resistance R-values; the Home Insulation Corporation name and address; the name of the inspection agency (Underwriters Laboratories Inc); and the evaluation report number (ESR-2360).

TABLE 1—THERMAL RESISTANCE (R-VALUES)

THICKNESS (inches)	R-VALUE (°F.ft ² .h/Btu)
ASTM C 518 TESTS VALUES	
1	3.8
3.5	11.3
5.5	17.9
CALCULATED R-VALUES¹	
2	6.4
4	12.8

For SI: 1 inch = 25.4 mm; 1°F.ft².h/Btu = 0.176 110°K.m²/W.

Calculated R-values are based on tested K values at a 3.5-inch thickness.