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DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07210—Building Insulation

REPORT HOLDER:

HOME INSULATION CORPORATION
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EVALUATION SUBJECT:

HOME FOAM®/INSULTHANE 100

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

Properties evaluated:

- Surface burning characteristics
- Thermal performance (*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 structures constructed in accordance with 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 spray-applied, semirigid, low-density, cellular polyurethane foam plastic insulation. The material is a two-component, open-cell, spray-applied, semirigid polyurethane foam plastic system. The foam plastic is fully water-blown with a nominal 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 5¹/₂ inches (140 mm) and a minimum density of 0.43 pcf (6.9 kg/m³), has a flame-spread index of not more than 75 and a smoke-developed index of not more than 450 when tested in accordance with ASTM E 84.

3.3 Thermal Performance:

Refer to Table 1 for the values of thermal conductivity (*k*-value) and thermal resistance (*R*-values) for the thicknesses tested.

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. In areas where the probability of termite infestation is "very heavy" as determined in accordance with IBC Figure 2603.8 or IRC Figure R301.2(6), and when foam plastic insulation is used with wood construction, the foam plastic must be installed in accordance with IBC Section 2603.8 or IRC Section R320.5. Ventilation of the 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.

4.3 Thermal Barrier:

Home Foam®/Insulthane 100 must be separated from the interior of the building by an approved thermal barrier of 1/2-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 IRC Section R314.4, as applicable, except when installation is in attics and crawl spaces.

In attics and crawl spaces where entry is made only for service of utilities, Home Foam®/Insulthane 100 must be separated from the interior of the building by an ignition barrier in lieu of a thermal barrier when installation is in accordance with IBC Section 2603.4.1.6 or IRC Sections R314.5.3 (attics) or R314.5.4 (crawl spaces), 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 to structures constructed 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 The spray-applied foam insulation must have a clearance above grade of 6 inches (152 mm) or greater, except as permitted in the exceptions to IBC Section 2603.8 or IRC Section R320.5.

- 5.7 The Part A and Part B components are produced in Brantford, Ontario, Canada, under a quality control program with inspections by Intertek Testing Services NA Ltd. (AA-691).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated February 2007.

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 manufacturer's name (Elastochem Speciality Chemicals Inc.) 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 (Intertek Testing Services NA Ltd.); and the evaluation report number (ESR-2360).

TABLE 1—THERMAL PROPERTIES

THICKNESS (in.)	THERMAL RESISTANCE <i>R</i> -VALUES (per inch)	THERMAL CONDUCTIVITY <i>k</i> -VALUES
0.9	3.786	0.2641
1.0	3.88	0.2577
1.1	3.631	0.2754
5.14	3.245	0.308
5.37	3.234	0.309

For SI: 1 inch = 25.4 mm.