

ICC-ES Evaluation Report

ESR-1261

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**DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION****Section: 07 21 00—Thermal Insulation****REPORT HOLDER:****ENVIRONMENTALLY SAFE PRODUCTS, INC.****313 WEST GOLDEN LANE****NEW OXFORD, PENNSYLVANIA 17350****(800) 289-5693**www.low-e.comsales@low-e.com**1.0 EVALUATION SUBJECT:****LOW-E™ REFLECTIVE FOIL INSULATION****EVALUATION SCOPE****Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)
- 1997 *Uniform Building Code*™ (UBC)

Properties evaluated:

- Thermal resistance
- Surface burning characteristics

2.0 USES

Low-E™ reflective foil insulation is used as wall cavity insulation.

3.0 DESCRIPTION

Low-E™ reflective foil insulation consists of a nominal 1/4-inch-thick (6.4 mm) core of polyethylene foam plastic material laminated between two layers, each consisting of aluminum foil with a fiberglass scrim and a polyethylene film. The insulation is available in rolls 4 feet (1219 mm) wide by 125 feet (38 100 mm) long, 5 feet (1524 mm) wide by 100 feet (30 480 mm) long, and 6 feet (1828 mm) wide by 84 feet (25 603 mm) long. Low-E™ has a flame-spread index of not more than 25 and a smoke-developed index of not more than 450 when tested in accordance with ASTM E 84 and UBC Standard 8-1.

4.0 INSTALLATION

Low-E™ insulation is placed on the inside of the stud cavity and installed with staples a minimum of 6 inches on center, at the midpoint of the 3/2-inch-deep (89 mm) side of 2-by-4 wood studs spaced 16 inches (406 mm) on center. The insulation forms two 1 5/8-inch-deep (41.3 mm) air spaces within the wall cavity. The exterior surface is covered with minimum 1/2-inch-thick (12.7 mm) plywood, installed in accordance with the applicable code. The interior surface is covered with minimum 1/2-inch-thick (12.7 mm) gypsum wallboard complying with ASTM C 36, attached in accordance with the applicable code. Inside surface-to-surface thermal resistance of the assembly is noted in Table 1 of this report. See Figure 1 of this report for an illustration of the assembly. Seams or tears shall be patched with Low-E™ aluminum foil seam tape.

5.0 CONDITIONS OF USE

The Low-E™ 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** Installation shall comply with this report, the manufacturer's published installation instructions and the applicable code.
- 5.2** The Low-E™ insulation is manufactured in New Oxford, Pennsylvania, under a quality control program with inspections by Intertek Testing Services NA Ltd. (AA-647).

6.0 EVIDENCE SUBMITTED

- 6.1** Data and reports of tests in accordance with the ICC-ES Acceptance Criteria for Reflective Foil Insulation (AC02), dated June 2006.
- 6.2** Installation instructions.
- 6.3** Quality control manual.

7.0 IDENTIFICATION

Each roll of the product shall be labeled with the manufacturer's name (Environmentally Safe Products), product name (Low-E), evaluation report number (ESR-1261), lot number, thermal resistance values, product dimensions, and name of the inspection agency (Intertek Testing Services NA Ltd.).

TABLE 1—INSIDE SURFACE-TO-SURFACE THERMAL RESISTANCE OF LOW-E™ INSULATION IN WALL CAVITIES¹

ASSEMBLY	THERMAL RESISTANCE ® (hr. ft. ² °F/Btu)	REFER TO
Wall cavity—horizontal heat flow	6.0	Figure 1

For SI: 1 inch = 25.4 mm, 1 (hr. ft.² °F)/Btu = 0.176 (m² K)/W.

¹Framing is 2-by-4 wood studs spaced 16 inches on center. Insulation is installed as described in Section 4.0.

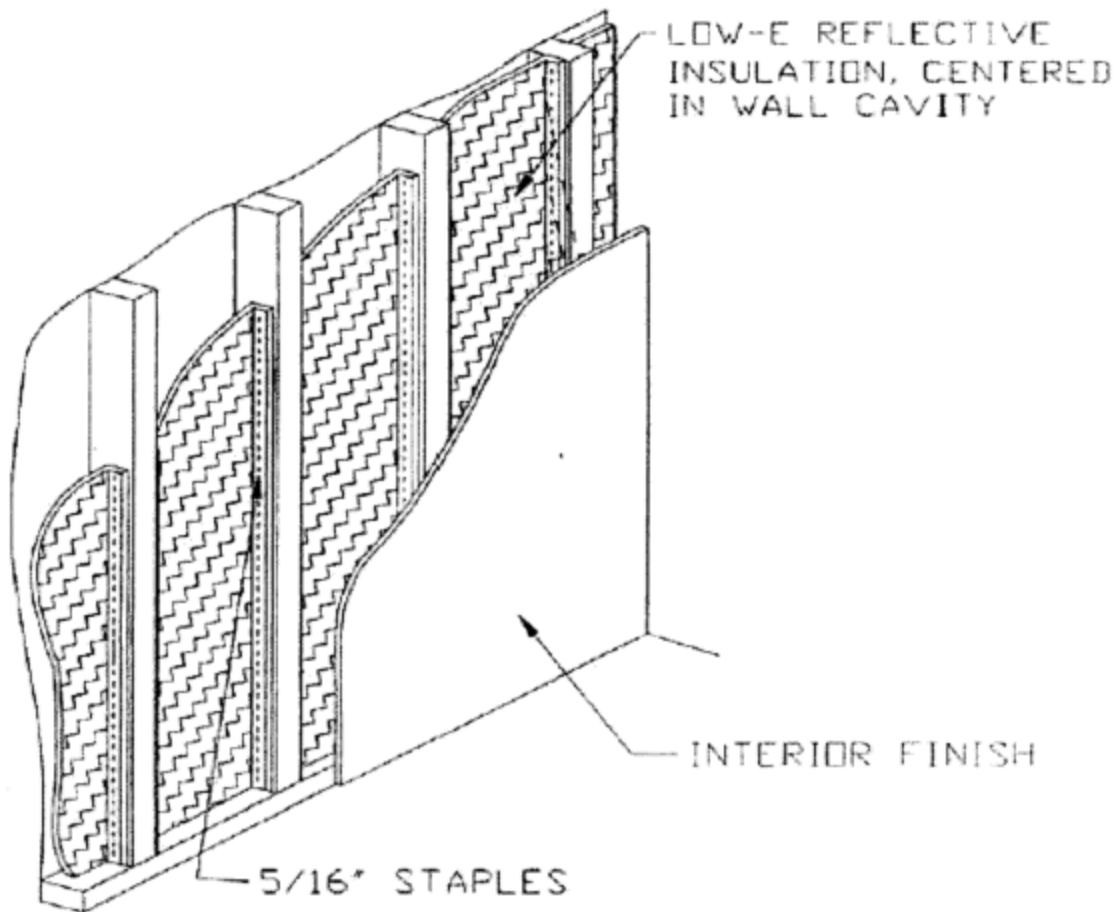


FIGURE 1—WALL CAVITY APPLICATION