

**ICC-ES Evaluation Report****ESR-3079**

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**DIVISION: 07 00 00—THERMAL AND MOISTURE  
PROTECTION****Section: 07 25 00—Water-Resistive Barriers/Weather  
Barriers****REPORT HOLDER:****ENVIRONMENTALLY SAFE PRODUCTS**  
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NEW OXFORD, PENNSYLVANIA 17350  
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[www.low-e.com](http://www.low-e.com)**EVALUATION SUBJECT:****ESP LOW-E HOUSEWRAP****1.0 EVALUATION SCOPE****Compliance with the following codes:**

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

**Properties evaluated:**

- Water resistance
- Vapor permeability
- Surface burning characteristics

**2.0 USES**

ESP Low-E Housewrap is used as a water-resistive barrier on the exterior side of exterior walls of buildings of Type V construction under the IBC and construction permitted under the IRC. The product is an alternative to the water-resistive barrier specified in IBC Section 1404.2 and IRC Section 703.2. The product is also considered equivalent to a 60-minute Grade D building paper as described in IBC Section 2510.6 and IRC Section 703.6.3.

**3.0 DESCRIPTION**

ESP Low-E Housewrap is comprised of a nominally  $\frac{3}{16}$ -inch-thick [0.22 inch actual (5.6 mm)] closed cell polyethylene core having a 1.5-pound-per-cubic-foot (24.0 kg/m<sup>3</sup>) nominal density, flame laminated to a 99 percent pure aluminum foil facer which is then perforated. ESP Low-E Housewrap weighs approximately 0.64 ounce per square foot (195 g/m<sup>2</sup>). ESP Low-E Housewrap is packaged in rolls, available in widths of 4, 5 and 6 feet (1219, 1524 and 1829 mm). ESP Low-E Housewrap 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 E84.

**4.0 INSTALLATION**

ESP Low-E Housewrap is installed over exterior wall sheathing prior to or after the installation of windows and/or doors. If doors and windows have been installed, the ESP Low-E Housewrap must be trimmed as close to the window or door opening as possible and sealed with approved adhesive tape. The Low-E Housewrap roll is placed approximately 6 inches (152 mm) from the start of a corner and is fastened to sheathing with corrosion-resistant staples having minimum 1-inch-wide (25.4 mm) crowns, corrosion-resistant nails having minimum  $\frac{3}{8}$ -inch diameter (9.5 mm) heads or corrosion resistant nails having minimum 1-inch-diameter (25.4 mm) plastic heads. Fasteners must be spaced a maximum of 16 inches (406 mm) on center both vertically and horizontally.

The Low-E Housewrap must be installed with the foil facing visible from the exterior. Product overlaps are 2.5 inches (63 mm) for horizontal seams. Upper courses are to overlap lower courses in a shingle-like manner. Horizontal seams must be taped with approved foil tape. Vertical overlaps must be a minimum of 6 inches (152 mm).

When Low-E Housewrap is used over foam sheathing, it must be attached with roofing nails or approved fasteners whose length exceeds the foam thickness by a minimum of  $\frac{1}{2}$  inch (12.7 mm). When used over wood based sheathing in an exterior stucco application, the Low-E Housewrap must be applied over two layers of Grade D water-resistive barrier with a 60-minute water resistive rating, applied over sheathing in accordance with IBC Section 2510.6 or IRC Section R703.6.3.

**5.0 CONDITIONS OF USE**

The Low-E Housewrap 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** Low-E Housewrap must be manufactured, identified and installed in accordance with this report and the manufacturer's published installation instructions. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.
- 5.2** The interior of the building must be separated from the Low-E Housewrap using an approved thermal barrier in accordance with IBC Section 2603.4, or Section R316.4 of the 2009 IRC or Section R314.4 of the 2006 IRC, as applicable.

- 5.3** Low-E Housewrap is manufactured in New Oxford, Pennsylvania, with inspections by Intertek Testing Services NA Ltd. (AA-690).

**6.0 EVIDENCE SUBMITTED**

- 6.1** Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Barriers (AC38), dated October 2009.
- 6.2** Reports of testing in accordance with ASTM E84.

**7.0 IDENTIFICATION**

ESP Low-E Housewrap is identified by a label attached to each roll which includes the manufacturer's address and phone number, traceability information, and the evaluation report number (ESR-3079). Labeling includes a statement noting the flame-spread index of 25 or less and the smoke-developed index of 450 or less and the name of the inspection agency (Intertek Testing Services NA Ltd.). "ESR-3079" is printed on each roll at regular intervals.