

ICC-ES Evaluation Report

ESR-2843

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**DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION****Section: 07 25 00—Water-Resistive Barriers/Weather
Barriers****REPORT HOLDER:**

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EVALUATION SUBJECT:**ENVIRO-DRI™ WEATHER-RESISTANT BARRIER (WRB)
SYSTEM****1.0 EVALUATION SCOPE****Compliance with the following codes:**

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

Property evaluated:

Water-resistive barrier

2.0 USES

The Enviro-Dri Weather-Resistant Barrier System is used as an alternative to the water-resistive barrier specified in IBC Section 1404.2 and IRC Section R703.2. The system complies with ASTM E 2570 as indicated in IBC Section 1408.4.1.1 and IRC Section R703.9.2.1. The system may be installed over plywood, oriented strand board (OSB) and 1/2-inch-thick structural fiberboard wall sheathing on exterior walls of Type V-B (IBC) construction or structures constructed in accordance with the IRC.

3.0 DESCRIPTION**3.1 General:**

The Enviro-Dri Weather-Resistant Barrier System consists of Enviro-Dri Field Membrane, Enviro-Dri Joint Sealant and Enviro-Dri Joint Fabric.

3.1.1 Enviro-Dri Field Membrane: Enviro-Dri Field Membrane is a single-component, flexible, polymer-modified asphalt emulsion coating material. Enviro-Dri Field Membrane is packaged in 52-gallon (197 L) and 330-gallon (1249 L) drums. It has one-year shelf life when stored at temperatures between 40°F and 100°F (4°C and 38°C) and out of direct sunlight.

3.1.2 Enviro-Dri Joint Sealant: Enviro-Dri Joint Sealant is a single-component, flexible, polymer-modified asphalt emulsion joint sealant material. Enviro-Dri Joint Sealant is packaged in 52-gallon (197 L) drums. Enviro-Dri Joint Sealant has one-year shelf life when stored at temperatures between 40°F and 100°F (4°C and 38°C) and out of direct sunlight.

3.1.3 Enviro-Dri Joint Fabric: Enviro-Dri Joint Fabric is a spun polyester fabric with a minimum weight of 1.4 oz/yd².

3.2 Water Vapor Transmission:

The water vapor transmission value of Enviro-Dri tested at an average of 0.030inch (30 mils) in accordance with ASTM E 96 (Water Method) is less than 35 g/m² per 24 hours but greater than 6 g/m² per 24 hours.

3.3 Sheathing:

The use of the Enviro-Dri Weather-Resistant Barrier System is limited to applications over the following sheathing materials:

- Plywood, Exposure 1, complying with U.S. DOC PS-1
- Oriented strand board, Exposure 1, complying with U.S. DOC PS-2
- 1/2-inch, Type IV, Grade 2 Structural Fiberboard complying with ASTM C 208

4.0 INSTALLATION**4.1 General:**

The installation of the Enviro-Dri Weather-Resistant Barrier System must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

4.2 Substrate Preparation:

The Enviro-Dri Weather-Resistant Barrier System must be installed on the exterior side of vertical exterior walls over the exterior sheathing. The sheathing type must be one of those listed in Section 3.3 of this report. Sheathing must be installed as required by the applicable code. The sheathing surfaces must be free of all bond-inhibiting materials, including dirt, oil and other foreign matter. The Enviro-Dri Weather-Resistant Barrier System must not be installed on wet surfaces, below-grade surfaces, or on surfaces subject to water immersion. The substrate must be sufficiently dry to ensure bonding (adhesion) of the membrane and joint sealant. Damaged sheathing must be removed and replaced.

4.3 Enviro-Dri Weather-Resistant Barrier System Application:

Enviro-Dri Field Membrane and Joint Sealant can be applied using a brush, trowel, manual roller, power roller or spray equipment. Both Enviro-Dri Field Membrane and Joint Sealant are ready for application as supplied. The substrate must be prepared as described in Section 4.2 of this report.

4.3.1 Weather: The air and surface temperatures at the time of application are permitted to be between 0°F (-17°C) and 130°F (54°C). Temperature during the application must not exceed 130°F (54°C). The Enviro-Dri System must not be installed during rain or impending rain or mist, or on wet surfaces that might damage the system before it can sufficiently dry and cure.

4.3.2 Enviro-Dri Joint Sealant Application: Joints between sheathing panels or between sheathing panels and framing must be sealed either using Enviro-Dri Joint Sealant or Enviro-Dri Joint Fabric and coating, per section 4.3.4. When using Enviro-Dri Joint Sealant, the joints must not exceed $\frac{1}{8}$ inch (3.2 mm) in thickness. The full depth of the joint must be filled with the Enviro-Dri Joint Sealant material. For joints between tightly butted sheathing panels, the joint must be sealed by application of a continuous layer of Enviro-Dri Joint Sealant to the exterior surface of the adjoining sheathing and across the joint. The Enviro-Dri Joint Sealant must extend a minimum of $\frac{1}{2}$ inch (12.7 mm) onto each adjoining sheathing panel and have a minimum wet thickness of 12 mils [0.012 inch (0.3 mm)]. For joints wider than $\frac{1}{8}$ inch (3.2 mm) that are backed with framing, the joint between the interior edge of the sheathing panel and the framing must be sealed with Enviro-Dri Joint Sealant at a minimum of $\frac{1}{4}$ inch (6.4 mm) wet thickness, measured as a radius from the joint.

4.3.3 Enviro-Dri Field Membrane Application: The sheathing area must be fully and evenly coated with Enviro-Dri Field Membrane applied at a minimum wet thickness of 12 mils [0.012inch (0.3 mm)].

4.3.4 Enviro-Dri Fabric Application: Enviro-Dri Joint Fabric must be fully coated and adhered to the exterior surface of the sheathing on both sides of joints and gaps with either Enviro-Dri Field Membrane or Enviro-Dri Joint Sealant.

4.3.5 Cure Time: At 70°F (21°C) and 50 percent relative humidity, both Enviro-Dri Field Membrane and Enviro-Dri Joint Sealant are dry to the touch within two to four hours. Drying time varies depending on temperature/humidity and surface conditions; cool or damp conditions may slow drying, while hot or dry conditions may accelerate drying. Enviro-Dri Joint Sealant normally takes longer to dry than Enviro-Dri Field Membrane, because it is applied in a thicker application. Drying time may vary with substrate and individual job conditions. Surfaces must be protected from rain until completely dry.

5.0 CONDITIONS OF USE

The Enviro-Dri Weather-Resistant Barrier System 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 must comply with this report, the manufacturer's published installation instructions, and the applicable code. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.2** For water-resistive coatings used in EIFS applications, special inspections are required at the jobsite in accordance with IBC Section 1704.14.1. For other applications, special inspections are not required at the jobsite if installation is done by an installer or contractor trained by the manufacturer, and a certificate of installation is presented to the code official at the completion of each project; otherwise, special inspections are required at the jobsite in accordance with IBC Section 1704.15. Duties of the inspector include verifying field preparation of materials, expiration dates, installation of components, curing of components, installation of joints and sealants, applied dry-film thickness and interface of coating material with flashings.
- 5.3** The Enviro-Dri Weather-Resistant Barrier System is limited to installations on vertical walls and must not be used on parapets or on sloped or horizontal surfaces.
- 5.4** The Enviro-Dri Weather-Resistant Barrier System must be covered with an exterior wall covering complying with the applicable code or a current ICC-ES evaluation report.
- 5.5** The Enviro-Dri Weather-Resistant Barrier System must not be used for repairing moving cracks or joints.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Coatings Used as Weather-resistive Barriers over Exterior Sheathing (AC212), dated June 2011.

7.0 IDENTIFICATION

Packages of the Enviro-Dri Weather-Resistant Barrier System products described in this report must be identified by a label bearing the manufacturer's name (Tremco Barrier Solutions) and address, product name, identification of components, lot or batch number, quantity of material in packaged mix, storage instructions and shelf life, and the ICC-ES evaluation report number (ESR-2843).