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ICC-ES Evaluation Report

ESR-3488

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Reissued 06/2018
This report is subject to renewal 06/2019.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 31 33—COMPOSITE RUBBER SHAKES

REPORT HOLDER:

G.E.M. INC.

EVALUATION SUBJECT:

**EUROSHIELD® HARVEST SHAKE, HERITAGE SLATE, EUROSHAKE®, EUROSLATE®
AND BEAUMONT SHAKE® ROOFING PANELS**



"2014 Recipient of Prestigious Western States Seismic Policy Council (WSSPC) Award in Excellence"



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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012, 2009 and 2006 *International Building Code®* (IBC)
- 2015, 2012, 2009 and 2006 *International Residential Code®* (IRC)

Properties evaluated:

- Weather resistance
- Wind resistance
- Fire Classification

2.0 USES

The EuroShield® Harvest Shake, Heritage Slate, EuroShake®, EuroSlate® and Beaumont Shake® roof panels are used as roof covering materials recognized as a Class C roof covering when installed in accordance with Section 4.5 of this report.

3.0 DESCRIPTION

The EuroShield® Harvest Shake, Heritage Slate, EuroShake®, EuroSlate® and Beaumont Shake® roofing panels are designed to provide a look of natural slate and shake. The panels are manufactured from a proprietary formulation using recycled rubber, additives and colorants. Accessories such as starter strip and hip and ridge caps are manufactured using the same materials as the panels. The materials are available in black, brown and driftwood.

The EuroShield® Harvest Shake and Heritage Slate panels are 40 inches (1016 mm) wide by 17 inches long (432 mm) and have an exposure of 7¹/₂ inches (191 mm), resulting in an installed weight of 2.4 pounds per square foot (11.7 kg/m²). The Beaumont Shake is 40 inches (1016 mm) wide by 20 inches (508 mm) and has an exposure of 9 inches (229 mm), resulting in an installed

weight of 2.1 pounds per square foot (10.25 kg/m²). The EuroShake® and EuroSlate® panels are 36 inches (914 mm) wide by 22¹/₂ inches (572 mm) long and have an exposure of 10 inches (254 mm), resulting in an installed weight of 3.4 pounds per square foot (16.6 kg/m²).

3.1 Underlayment:

Underlayment must be a minimum of two layers of ASTM D226 Type I (No. 15) asphalt-saturated organic felt, or one layer of ASTM D226 Type II (No. 30) asphalt-saturated organic felt. When the roof panels are used as a Class C roof covering, underlayment must be as described in Section 4.5.1 of this report.

3.2 Fasteners:

Fasteners must be minimum No. 12 gage [0.105 inch (2.67 mm)] galvanized steel nails, with ³/₈-inch-diameter (9.5 mm) heads, of sufficient length to penetrate into the sheathing ³/₄-inch (19 mm) or through the sheathing, whichever is less.

3.3 Flashing:

Flashing must be in accordance with 2015, 2012 and 2009 IBC Sections 1503.2 and 1507.7.7 [2006 IBC Sections 1503.2 and 1507.7.6] or IRC Sections R903.2 and R905.6.6, as applicable.

3.4 Adhesive Strip:

The roof panels have styrene butadiene rubber (SBR) adhesive strips along the underside of the butt edge. See Figure 1 for more details.

4.0 INSTALLATION

4.1 General:

The roof panels must be installed in accordance with IBC Section 1507.7 or IRC Sections R905.6, as applicable, and the manufacturer's published installation instructions, unless otherwise noted in this report. The manufacturer's installation instructions must be available at the jobsite at all times during installation.

The roof panels must be installed on roofs with solid sheathing and a minimum slope of 4:12 (33 percent slope) and a maximum slope of 20:12 (167 percent slope). Solid sheathing must be code-complying, minimum ¹⁵/₃₂-inch-thick (11.9 mm) exterior-grade plywood, ⁷/₁₆-inch-thick (11.1 mm) oriented strand board (OSB), or nominally 1-inch-thick (25.4 mm) lumber. The sheathing must be structurally adequate and fastened to resist the wind loads as specified by IBC Section 1609 or IRC Section R301.2.1 for components and cladding.

4.2 Underlayment:

Underlayment, as described in Section 3.2, must be installed in accordance with IBC Section 1507.7.3 or IRC Section R905.6.3, as applicable. In areas where the average daily temperature in January is 25°F (-4°C) or less, or where there is a possibility of ice forming along the eaves and causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together, or a self-adhering underlayment complying with ASTM D1970 or currently recognized in an ICC-ES evaluation report as complying with the ICC-ES Acceptance Criteria for Self-adhered Underlayments for Use as Ice Barriers (AC48); and, must extend from the eave's edge to a point 24 inches (610 mm) inside the exterior wall line of the building.

4.3 Roof Panels:

The EuroShield® Harvest Shake, Heritage Slate, EuroShake® and EuroSlate® roofing panels must be installed using No. 12 [0.109 inch (2.77 mm)] corrosion-resistant nails, located approximately ³/₄-inch (6.35 mm) above the open keyways on each panel. See Figure 2 for fastener locations. After the panel is nailed in place, the butt edges of the panel must be pressed down to make firm contact with the course below.

4.4 Hips, Ridges and Valleys:

Hips, ridges and valleys must be installed and flashed in accordance with the manufacturer's published installation instructions, Section 4.1 of this report and the applicable code.

4.5 Fire Classification:

The roof assembly is recognized as a Class C roof assembly under IBC Section 1505.1 or IRC Section R902.1, when installed in accordance with Section 4.5.1.

4.5.1 Class C Roof Covering for EuroShield® Harvest Shake, Heritage Slate, EuroShake® and EuroSlate®: Euroshield® Harvest Shake, Heritage Slate, EuroShake® and EuroSlate® installed as follows with an exposure of 7¹/₂ inches (194 mm):

- Deck: Closely fitted, minimum ¹⁵/₃₂-inch (11.9 mm) thick exterior grade plywood.
- Maximum roof slope: 20:12 (167 percent)
- Underlayment: Minimum 2-inch-wide (51 mm) strip of ASTM D226, Type II (No. 30) asphalt-saturated organic felt covering all joints in plywood deck covered with one layer of ASTM D226, Type II (No. 30) asphalt-saturated organic felt over the entire surface of the deck. As, an alternative, two layers of ASTM D226, Type I (No. 15) asphalt-saturated organic felt over the entire surface of the deck.

4.5.2 Class C Roof Covering for Beaumont Shake: Beaumont Shake installed as follows with an exposure of 9 inches (229 mm).

- Deck: Closely fitted, minimum ¹⁵/₃₂-inch (11.9 mm) thick exterior grade plywood.
- Maximum roof slope: 20:12 (167 percent)
- Underlayment: Minimum 4-inch (102 mm) wide strip of ASTM D226 Type II (No. 30) asphalt-saturated organic felt covering all joints in plywood deck covered with one layer of ASTM D226 Type II (No. 30) asphalt-saturated organic felt over the entire surface of the deck. As, an

alternative, two layers of ASTM D226, Type I (No. 15) asphalt-saturated organic felt over the entire surface of the deck.

4.6 Wind Resistance:

Under the 2015 IBC, 2015 IRC and 2012 IBC, when installation is in accordance with this report, the roof panels are limited to use in areas subject to a maximum ultimate design wind speed (V_{ult}) of 130 mph (209 km/hr) on structures having a mean roof height of 40 feet (12.2 m) or less in Exposure B areas.

Under the 2009 and 2006 IBC, and 2012, 2009 and 2006 IRC, when installation is in accordance with this report, the roof panels are limited to use in areas subject to a maximum basic wind speed of 100 mph (161 km/hr) on structures having a mean roof height of 40 feet (12.2 m) or less in Exposure B areas.

4.7 Reroofing:

Prior to application of the roof panels, the existing roof covering and underlayment must be completely removed. Any damaged sheathing must be replaced. The installation of the roof panels may then proceed as described in Section 4.1 through 4.4.

5.0 CONDITIONS OF USE

The Euroshield® Harvest Shake, Heritage Slate, EuroShake® and EuroSlate® roof panels 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 applicable code and the manufacturer's published installation instructions. If there are any conflicts between the manufacturer's installation instruction and this report, this report governs.
- 5.2 The roof panels must not be installed at a roof slope less than 4:12 [18.5 degrees (33 percent)] or greater than 21:12 [60 degrees (173 percent)].
- 5.3 The roof coverings are manufactured in Calgary, Alberta, Canada, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Special Roofing Systems (AC07), February 2014 (editorially revised May 2016).

7.0 IDENTIFICATION

- 7.1 Each roofing panel is labeled with the report holder's name (G.E.M. Inc.), the product name, the date of manufacture and the ICC-ES evaluation report number (ESR-3488).
- 7.2 The report holder's contact information is the following:

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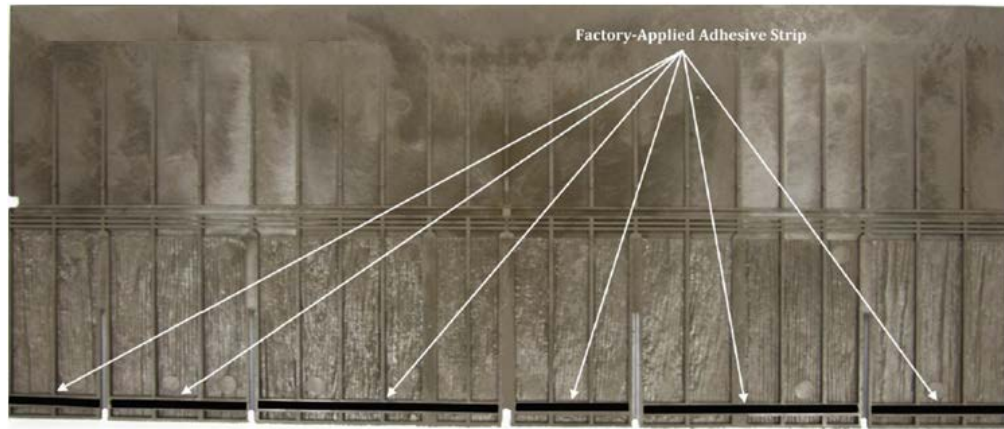


FIGURE 1—ADHESIVE STRIP ALONG THE UNDERSIDE

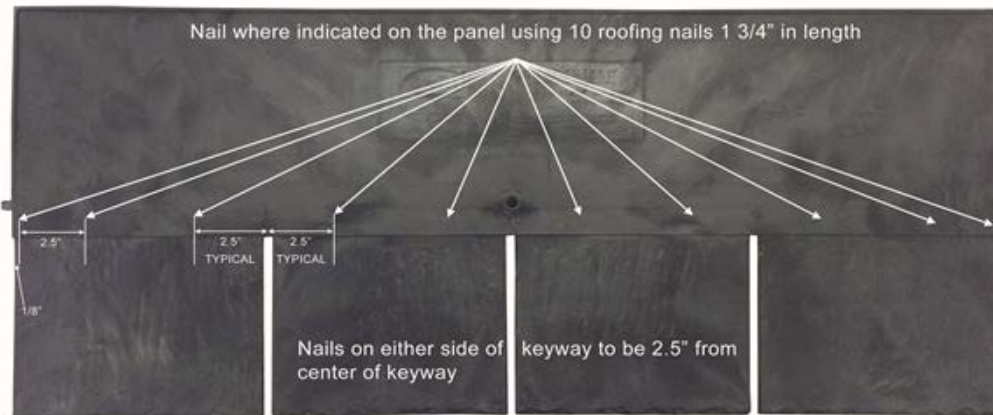


FIGURE 2—FASTENER LOCATIONS