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ICC-ES Evaluation Report

ESR-3938

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Reissued 05/2019
This report is subject to renewal 05/2020.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
SECTION: 06 43 16—WOOD RAILINGS

REPORT HOLDER:

SCREEN TIGHT

EVALUATION SUBJECT:

MESH GUARD SYSTEM



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



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Section: 06 43 16—Wood Railings

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EVALUATION SUBJECT:

MESH GUARD SYSTEM

1.0 EVALUATION SCOPE

Compliance with the following codes:

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

Properties evaluated:

- Structural
- Durability
- Surface-burning characteristics

2.0 USES

The Mesh Guard System described in this report is limited to interior and exterior use as an in-fill system on guards for balconies, porches, and decks of Type V-B (IBC) construction, and dwellings constructed in accordance with the IRC.

3.0 DESCRIPTION

3.1 General:

The Mesh Guard System consists of guard in-fill components installed on either wood framed or preservative-treated wood framed guards.

3.2 In-fill System:

3.2.1 General: The Mesh Guard system is installed on guards with a minimum height of 36 inches (914 mm) or maximum height of 44 inches (1117.6 mm) above the walking surface. The mesh screening consists of a vinyl coated polyester core yarn-woven with a visible orange striping along the top and bottom borders. The mesh screening is held in place with an extruded polyvinyl chloride (PVC) flat spline with a visible orange striping; both are rolled into the cavity of the extruded PVC mesh guard base with a screening tool. A galvanized 14 gauge (1.63 mm) steel reinforcement track is used to secure the

PVC mesh guard base to the wood framing. A decorative PVC mesh guard cap snaps over the PVC mesh guard base and comes in white, beige, grey, and brown. The PVC mesh guard base and cap come in 1-1/2 inch (38.1 mm) widths. See Figure 1 for details of the Mesh Guard System.

3.2.2 Durability: The Mesh Guard System has been evaluated for structural performance when exposed to a temperature range from -20°F (-29°C) to 125°F (52°C).

3.2.3 Surface-burning Characteristics: When tested in accordance with ASTM E84, the mesh screening and PVC components of the Mesh Guard System have a flame-spread index of 25 or less and a smoke-developed index of 450 or less.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The Mesh Guard System, when used as an in-fill system on guards, is satisfactory to resist loads specified in Section 1607.8.1.2 of the 2015 and 2012 IBC (Section 1607.7.1.2 of the 2009 IBC) and Table R301.5 of the IRC, when installed at the maximum clear span distance of 72 inches (1828.8 mm) between the posts.

4.2 Installation:

Installation must be in accordance with the manufacturer's published installation instructions, this report, and guard height and opening limitations provisions specified in Section 1015 of the 2015 IBC (Section 1013 of the 2012 and 2009 IBC) and Section R312 of the IRC, as applicable. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

When installed on wood species with the minimum specific gravity of 0.42, each PVC mesh guard base is cut to length and installed with the galvanized 14 gauge (1.63 mm) steel reinforcement track using #6 x 1-1/4 inches (31.8 mm) stainless steel screws spaced at 8 inches (203.2 mm) on center. On vertical installations of the PVC mesh guard base, the galvanized 14 gauge (1.63 mm) steel reinforcement track was drilled 3/4 inch (19.1 mm) from the top and bottom with an additional #6 x 1-1/4 inch (31.8 mm) stainless steel screw to secure the track to the PVC mesh guard base. The mesh screening, cut to length along the orange striping, is stretched across the mesh guard base and installed by rolling the PVC flat spline with the orange striping facing down, cut to length, into the cavity of the PVC mesh guard base with a screening tool. After the PVC flat spline is inserted, the decorative PVC mesh guard cap is cut to length and snapped into place over the PVC mesh guard base using a soft mallet. See Figure 1 for details.

5.0 CONDITIONS OF USE

The Mesh Guard 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. When the manufacturer's published installation instructions differ from this report, this report governs.
- 5.2 This product is limited to interior and exterior use as an in-fill system on guards for balconies, porches, and decks of Type V-B (IBC) construction, and dwellings constructed in accordance with the IRC.
- 5.3 Only those fasteners and fastener configurations described in this report have been evaluated for the installation of the in-fill system to the untreated or preservative-treated wood guard.
- 5.4 The design of the wood guards (untreated and preservative-treated) must be by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Calculations and details showing compliance must be submitted to the code official.
- 5.5 The Mesh Guard System is manufactured in Georgetown, South Carolina, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Data for in-fill load requirements in accordance with the ICC-ES Acceptance Criteria for Handrails and Guards (AC273), dated June 2017 of the mesh screening.
- 6.2 Data for durability requirements in accordance with the ICC-ES Acceptance Criteria for Handrails and Guards (AC273), dated June 2017, of the mesh screening and PVC components.
- 6.3 Data in accordance with ASTM E84 for the surface-burning characteristics of the mesh screening and PVC components.

7.0 IDENTIFICATION

- 7.1 The Mesh Guard System described in this report must be identified by a stamp on each individual piece or a label on the packaging, bearing the report holder's name (Screen Tight), product name (Mesh Guard System), and the ICC-ES evaluation report number (ESR-3938).
- 7.2 The report holder's contact information is the following:

SCREEN TIGHT
407 CHURCH STREET, SUITE A
GEORGETOWN, SOUTH CAROLINA 29440
(800) 768-7325
www.screentight.com

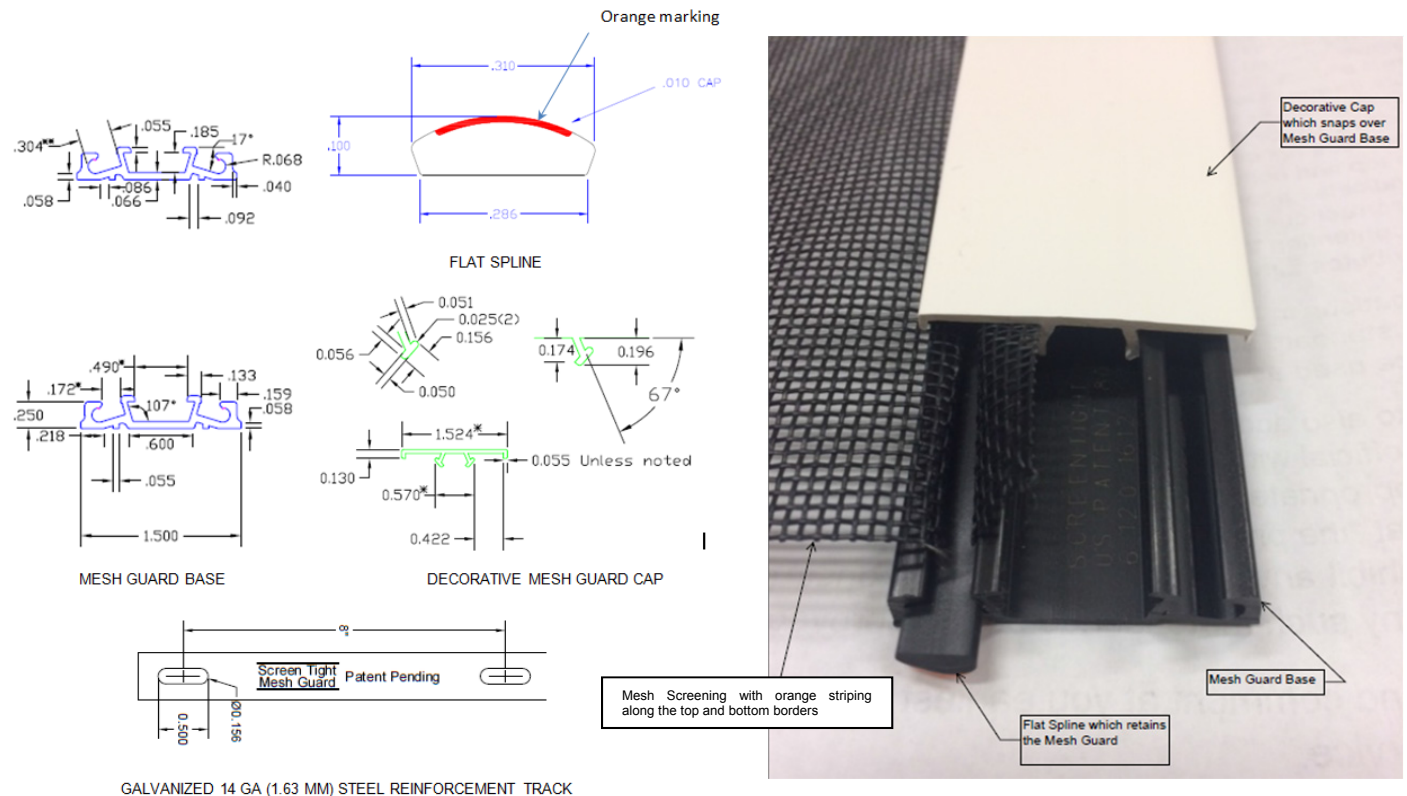


FIGURE 1—MESH GUARD SYSTEM