

ICC-ES Evaluation Report**ESR-2312**

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A Subsidiary of the International Code Council®

DIVISION: 03 00 00—CONCRETE**Section: 03 11 19—Insulating Concrete Forming****REPORT HOLDER:****AMVIC INCORPORATED**
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CANADA
(416) 410-5674
www.amvicsystem.com**EVALUATION SUBJECT:****AmDeck® FLOOR AND ROOF INSULATION SHAPES****1.0 EVALUATION SCOPE****Compliance with the following codes:**

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

Property evaluated:

Surface burning characteristics

2.0 USES

The AmDeck® Floor and Roof Shapes are nonstructural, modular insulation units used to construct concrete floor and roof assemblies used in Type V-B construction under the IBC, and for structures under the IRC utilizing provisions of this report.

3.0 DESCRIPTION**3.1 General:**

The AmDeck® Floor and Roof Insulating Shapes have recesses on the top and bottom for concrete in-fill and cold-formed steel framing members, respectively. The cold-formed steel framing members, spaced at 16 inches (406 mm) on center, are used to support the AmDeck shapes during construction, and are to be the framing members supporting the interior finish.

3.2 Material:

AmDeck® shapes are expanded foam plastic molded from expanded polystyrene (EPS) beads reinforced with injection-molded polypropylene webs (see Figure 1). AmDeck shapes have a minimum density of 1.35 lbs/ft³ (21.6 kg/m³) and comply with ASTM C578, Type II. The foam plastic has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84.

4.0 DESIGN AND INSTALLATION**4.1 Design:**

Both the structural reinforced concrete placed over the AmDeck® shapes and the cold-formed steel ceiling framing members must be designed in accordance with the IBC. The reinforced concrete must be designed as a reinforced concrete, one-way slab. For use under the IRC, both reinforced concrete and steel framing must be designed in accordance with IRC Section R301.1.3.

4.2 Installation:

The installation must be in accordance with the manufacturer's installation instructions and the approved construction documents.

4.3 Thermal Barrier:

The shapes must be finished on the interior side (ceiling side) with a thermal barrier of 1/2-inch-thick (16 mm), regular gypsum wallboard complying with ASTM C36 or ASTM C1396, fastened at 8 inches (203 mm) on center to each cold-formed steel ceiling framing member spaced at 16 inches (406 mm) on center. Gypsum wallboards are mechanically installed perpendicular to the steel joists with 1 1/2-inch Type S screws.

4.4 Special Inspection:

Special inspection in accordance with IBC Sections 1704.1 and 1704.15 are required under both the IBC and the IRC.

5.0 CONDITIONS OF USE

The AmDeck® Floor and Roof Insulation Shapes described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** Installation complies with this report, the manufacturer's installation instructions and the applicable code. In case of a conflict, this report governs.
- 5.2** AmDeck® Floor and Roof Insulation Shapes are limited to use in Type V-B construction under the IBC, and structures under the IRC utilizing provisions of this report.
- 5.3** Where the probability of termite infestation is defined by the code official as "very heavy", the foam plastic must be installed in accordance with IBC Section 2603.8 or IRC Section R318.4, as applicable. Areas of very heavy termite infestation must be determined in accordance with IBC Figure 2603.8 or IRC Figure R301.2(6), as applicable.

- 5.4 The AmDeck shapes must be separated from the building interior with a thermal barrier as described in Section 4.3 of this report.
- 5.5 Use of the insulating shapes to support code-required loads in addition to all construction loads is outside the scope of this report.
- 5.6 Special inspection is required in accordance with Section 4.4 of this report.
- 5.7 The shapes are manufactured at the Amvic[®] facility in Toronto, Ontario, Canada, under a quality control program with inspections conducted by Intertek.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated February 2011; including reports of tests in accordance with UL 1715.

7.0 IDENTIFICATION

Each shape is identified by a label indicating the manufacturer's name (Amvic) and address, the product name, the inspection agency name (Intertek), and the evaluation report number (ESR-2312).

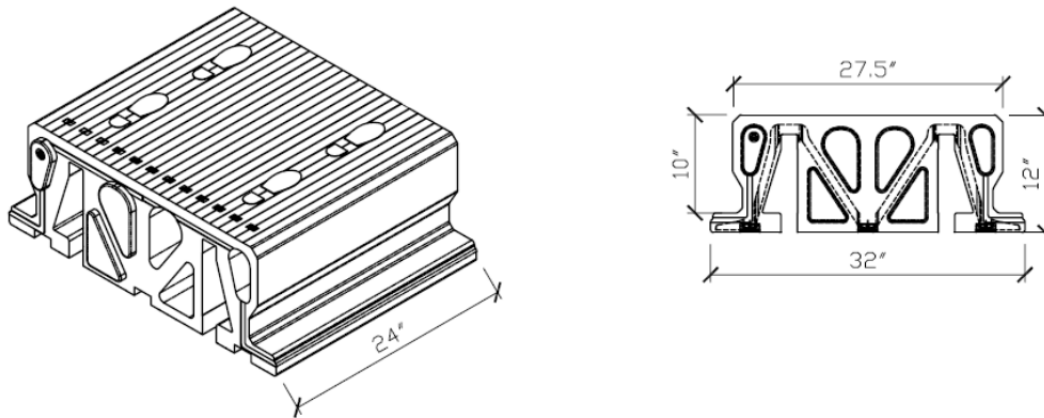


FIGURE 1—AMDECK[®] FLOOR AND ROOF INSULATION SHAPES