ICC-ES Evaluation Report

ESR-5261

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Subject to renewal February 2026

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION **Section: 07 21 00—Thermal Insulation**	**REPORT HOLDER:** **ALLEGUARD**	**EVALUATION SUBJECT:** **EXPANDED POLYSTYRENE (EPS) PANELS**	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015, 2012, and 2009 *International Building Code®* (IBC)
- 2021, 2018, 2015, 2012, and 2009 *International Residential Code®* (IRC)
- 2021, 2018, 2015, 2012 and 2009 *International Energy Conservation Code®* (IECC)

Properties evaluated:

- Physical Properties
- Surface-burning Characteristics
- Thermal Resistance (R-values)

2.0 USES

Alleguard's expanded polystyrene (EPS) panels are used as non-structural thermal insulation in buildings of Type V Construction under the IBC and in structures constructed in accordance with the IRC when installed in accordance with this report.

3.0 DESCRIPTION

3.1 General:

Alleguard's expanded polystyrene (EPS) panels are composed of rigid cellular expanded polystyrene produced using Epsilyte, LLC Grade 54 beads, subject of ESR-1634. The insulation boards have a nominal density of 0.9 pcf (15 kg/m^3) and are classified as Type I in accordance with ASTM C578. The insulation boards are available at a maximum thickness of 7.25 inches (184 mm) for wall panels and 14.25 inches (362 mm) for ceiling panels.

3.2 Surface-burning Characteristics:

The insulation boards have a flame-spread of 25 or less and smoke development index of 450 or less at maximum thickness of 4 inches (101.6 mm) when tested in accordance with ASTM E84 (UL 723).

3.3 Thermal Resistance R-values

The boards have a thermal resistance (R-value) as shown in Table 1.

4.0 DESIGN AND INSTALLATION

4.1 General:

Installation of the foam plastic insulation must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at all times on

the jobsite during installation. The EPS insulation boards must be attached to supports in a manner that will secure the insulation in place.

The interior of the building must be separated from the insulation boards with a thermal barrier as required in IBC Section 2603.4 and IRC Section R316.4.

A vapor barrier may be required by the code official in accordance with IBC Section 1404.3 (2015, 2012 and 2009 IBC Section 1405.3) and IRC R702.7 of the 2021, 2018, 2015 and 2012 IRC, as applicable.

5.0 CONDITIONS OF USE:

The Alleguard's expanded polystyrene (EPS) 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 report holder's published installation instruction and the applicable code. In the event of a conflict between the report holder's published installation instruction and this report, this report governs.

5.2 Use of the insulation boards to resist structural loads is outside the scope of this report. The wall must be braced in accordance with the requirements of the applicable code.

5.3 The insulation boards must be separated from the interior of the building by an approved thermal barrier as required in IBC Section 2603.4 and IRC Section R316.4.

5.4 Insulation boards used in walls must not exceed 7.25 inches (184 mm) in thickness.

5.5 Insulation boards used in ceilings must not exceed 14.25 inches (362 mm) in thickness.

5.6 Use of insulation in areas where the probability of termite infestation is "very heavy" must be in accordance with IBC Section 2603.8 or IRC Section R318.4, as applicable. In these areas there must be a clearance of 6 inches (152 mm) between the foam plastic insulation and exposed earth.

5.7 Jobsite certification and labeling of the insulation must comply with 2021, 2018 and 2015 IRC Section N1101.10 [2012 IRC Section N1101.12 (2009 IRC Section 1101.4)] and 2021, 2018, 2015 and 2012 IECC Section C303.1, R303.1 and R401.3 (2009 IECC Sections 303.1 and 401.3), as applicable.

5.8 The insulation boards are manufactured in Grandville, Michigan, under a quality-control program with inspections provided by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated June 2015 (editorially revised December 2020)

6.2 Test reports in accordance with NFPA 286.

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5261) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, each bundle of Alleguard's expanded polystyrene (EPS) panels shall be labeled with the manufacturer's name (Alleguard) and address; the date of manufacture; the product name [Expanded Polystyrene (EPS)]; the density (0.9 pcf); the thermal-resistance R-value (when applicable); and the evaluation report number (ESR-5261)

7.3 The report holder's contact information is the following:

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TABLE 1— MINIMUM *R*-VALUE (°F·ft²·h/BTU) AT 75°f MEAN TEMPERATURE

Property	Type I
Density, min., lb/ft³ (kg/m³)	0.9 (15)
Thermal Resistance value, per inch of thickness at 75°F·ft²·h/BTU (°K·m²/W)[1]	3.6 (0.63)

For **SI:** 1 lb/ft³= 16.018 kg/m³, 1°F·ft²·h/BTU = 0.176 °K·m²/W, 1 inch= 25.4 mm

[1] Based on thickness of 1.0 inch