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# ICC-ES Listing Report ESL-1648

Issued April 2025 This listing is subject to renewal in April 2026.

CSI: DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION Section: 07 21 00—Thermal Insulation

# Product Certification System:

The ICC-ES product-certification system includes evaluating evidence in support of test data provided by the listee to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

- Product: CORE FOAM MASONRY FOAM INSULATION®
- Listee: CFIFOAM INC.

# **Evaluation:** The Core Foam Masonry Foam Insulation was evaluated to the following standards:

- 16 CFR Part 460 [amended February 10, 2025], Labeling and Advertising of Home Insulation, Federal Trade Commission
- ASTM C518-21, Standard Test Method for Steady-State Thermal Transmission Proprieties by Means of the Heat Flow Meter Apparatus, ASTM International.
- UL 723 (-2018, -2008 with revisions through August 2013 and -2008 with revisions through September 2010), Standard for Test for Surface Burning Characteristics for Building Materials, Underwriters Laboratories, LLC.
- ASTM E84 (2021a, -2018B, -2016 and -2013A), Standard Test Method for Surface Burning Characteristics of Building Materials, ASTM International.

#### **Description of Product:**

CfiFOAM's Core Foam Masonry Foam Insulation<sup>®</sup> is intended for use as an insulation for home construction. The insulation is a low density, foam-in-place insulation designed for the cores of concrete block walls. The insulation is comprised of two parts, a spray-dried resin and a foaming catalyst concentrate. The insulation manufactured by cfiFOAM when tested in accordance with ASTM C518 at the conditions represented in Table 1, report a thermal resistance (*R*-value) as shown in Table 1.

**Findings:** CfiFOAM's Core Foam Masonry Foam Insulation<sup>®</sup> shows compliance in the application sections under 16 CFR §460, where the average thicknesses, average densities, conditioning times, mean test temperatures and temperature differences, report a thermal resistance (*R*-values) tested in accordance with ASTM C518. See Table 1 for results.

CfiFOAM's Core Foam Masonry Foam Insulation<sup>®</sup> installed within two different CMU assemblies where the average thicknesses, average densities, conditioning times, mean test temperatures and temperature differences, report a thermal resistance (*R*-values) tested in accordance with ASTM C518. See Table 2 for results.

CfiFOAM's Core Foam Masonry Foam Insulation<sup>®</sup> as noted in Table 3, have a flame-spread index of 25 or less and a smoke-developed index of 450 or less, based on testing in accordance with UL 723 / ASTM E84, as referenced in the applicable sections of the following code editions:

Listings are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the listing or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this listing, or as to any product covered by the listing.



- 2024 International Residential Code<sup>®</sup> Applicable Section: R303.3
- 2021, 2018 and 2015 International Residential Code<sup>®</sup> Applicable Section: R316.3

Approval of the product's use and all other relevant code sections is the sole responsibility of the local code (building) official.

### Identification:

- The ICC-ES mark of conformity, electronic labeling, or the listing report number (ICC-ES ESL-1648) along with the name, registered trademark, or registered logo of the listee must be included in the product label.
- 2. In addition, packaging of the Core Foam Masonry Foam Insulation<sup>®</sup> components carry a label indicating the manufacturer's address, the product name, required labeling information in accordance with 16 CFR §460.12, fact sheet in accordance with 16 CFR §460.13 and the ICC-ES Listing Mark.
- 3. The report holder's contact information is the following:

CFIFOAM, INC. P.O BOX 10393 KNOXVILLE,TN 37939 (865) 588-4465 www.cfifoam.com info@cfifoam.com

**Installation:** The product must be installed in accordance with the cfiFOAM's published installation instructions and applicable codes.

#### **Conditions of listing:**

- 1. The listing addresses only conformance with the standards and code sections noted above.
- 2. Approval of the product's use is the sole responsibility of the local code official.
- 3. The listing applies only to the materials tested and as submitted for review by ICC-ES.
- 4. Details related to incorporation of the products are outside the scope of this listing report.
- 5. The CfiFOAM's Core Foam Masonry Foam Insulation<sup>®</sup> is manufactured under a quality control program with inspections by ICC-ES.

AVERAGE THICKNESS (inch)	AVERAGE DENSITY (Ib/ft <sup>3</sup> )	CONDITIONING TIME (hr)	MEAN TEST TEMPERATURE (°F)	TEMPERATURE DIFFERENCE (°F)	THERMAL RESISTANCE, <i>R</i> -VALUE (°F ·ft <sup>2</sup> ·hr/Btu)
1.0	1.31	24	75	40	4.6
2.0	1.32	24	75	40	9.1
3.0	1.33	24	75	40	13
3.5	1.32	24	75	40	15 <sup>1</sup>
5.5	1.32	24	75	40	24 <sup>1</sup>

### Table 1 — Thermal Resistance (*R*-values)

For SI: 1 inch= 25.4 mm, 1°F ·ft<sup>2</sup>·hr/Btu= 0.176110 K.m<sup>2</sup>.h/W

<sup>1</sup>Calculated R-values are based on tested K-values at 1- and 3-inch thickness.

\*R-values greater than 10 have been rounded to the nearest whole number.

Table 2 — Thermal Resistance	(R-values)	) of CMU Insulated	Assemblies <sup>1,2</sup>
	n-values		Assemblies

ASSEMBLIES	THICKNESS (INCH)	CONDITIONING TIME (hr)	MEAN TEST TEMP. (°F)	TEMP. DIFFERENCE (°F)	THERMAL RESISTANCE, <i>R</i> -VALUE (°F ∙ft²∙hr/Btu)	INSULATION NOMINAL DENSITY (Ib/ft <sup>3</sup> )	CMU PROPERTIES		
							NOMINAL DENSITY (lb/ft <sup>3</sup> )	WEB THICKNESS (inch)	FACE SHELL THICKNESS (inch)
Assembly 1 <sup>3</sup>	8.15	24	75	40	11.8	1.0	92	0.76	1.39
Assembly 2 <sup>4</sup>	8.15	24	75	40	8.68	1.0	82	1.0	1.25

For SI: 1 inch= 25.4 mm, 1°F ·ft<sup>2</sup>·hr/Btu= 0.176110 K.m<sup>2</sup>.h/W

<sup>1</sup>The R-values reported in this table are not to be used for compliance with 16 CFR Part 460.

<sup>2</sup>The reported test results do not include air film resistance.

<sup>3</sup>See Figure 1 for additional CMU block dimensions. <sup>4</sup>See Figure 2 for additional CMU block dimensions.

# TABLE 3 — SURFACE BURNING CHARACTERISTICS

NOMINAL DENSITY	MAXIMUM	FLAME-SPREAD	SMOKE-DEVELOPED
(lb/ft <sup>3</sup> )	THICKNESS (inch)	INDEX (FSI)	INDEX (SDI)
1.0	3.5	25 or less	450 or less

For SI: 1 inch= 25.4 mm, 1lb/ft3=16 kg/m3







FIGURE 1- 8-INCH PRO BLOCK .75" WEB

FIGURE 2— 8 INCH X 82 PCF HIGH PERFORMANCE CMU