

ICC-ES Evaluation Report

ESR-5173

Issued August 2024

This report also contains:


- LABC Supplement

Subject to renewal August 2025

- CBC Supplement

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<p>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION.</p> <p>Section: 07 21 00— Thermal Insulation</p> <p>Section: 07 22 00—Roof and Deck Insulation</p>	<p>REPORT HOLDER:</p> <p>POLIESTIRENO ALFA GAMMA S.A. DE C.V.</p>	<p>EVALUATION SUBJECT:</p> <p>ALFATERM, ALFATERM T&G, AND ALFATERM EIFS INSULATION BOARDS</p>	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018 and 2015 [International Building Code® \(IBC\)](#)
- 2021, 2018 and 2015 [International Residential Code® \(IRC\)](#)
- 2021, 2018 and 2015 [International Energy Conservation Code® \(IECC\)](#)

Properties evaluated:

- Physical properties
- Thermal resistance (*R*-values)
- Surface burning characteristics
- Attic and crawl space installation

For evaluation for compliance with codes adopted by the [California Office of Statewide Health Planning and Development \(OSHPD\) AKA: California Department of Health Care Access and Information \(HCAI\) and the Division of State Architects \(DSA\)](#), see the [ESR-5173 CBC, CRC and CEC Supplement](#).

For evaluation for compliance with codes adopted by [Los Angeles Department of Building and Safety \(LADBS\)](#), see [ESR-5173 LABC and LARC Supplement](#).

2.0 USES

Alfaterm, Alfaterm T&G and Alfaterm EIFS insulation boards are used as non-structural thermal insulation in buildings of Type V construction (IBC) and construction permitted under the IRC. The insulation boards may be used as insulation boards on the exterior side of exterior walls, in wall cavities, in ceiling assemblies, in attics and crawl spaces, as roof insulation when evaluated as a component of a roof-covering assembly in a current ICC-ES evaluation report, and in exterior cementitious wall coating systems or as a component in exterior insulation and finish systems (EIFS) when listed as a component of such systems in a current ICC-ES evaluation report. The insulation may also be used as exterior perimeter insulation around concrete slab edges, on foundation walls, or under flat concrete slab on grade construction, except in areas where the probability of termite activity is “very heavy”.

3.0 DESCRIPTION

3.1 General:

The insulation boards are expanded polystyrene foam plastic insulation boards produced with either BASF NEOPOR[®] EPS (Neopor F5300 Plus) beads described in [ESR-2784](#) or Epsilyte, LLC Grade 54 beads described in [ESR-1634](#). The insulation boards have a minimum density of 1.35 pcf (21.6 kg/m³) and are classified as Type II boards in accordance with ASTM C578. The insulation boards are available in various lengths and widths. The insulation boards have a flame-spread index of not greater than 25 and a smoke developed index of not greater than 450 when tested at a thickness of 5 inches (127 mm) in accordance with ASTM E84 (UL 723). The boards have a thermal resistance (*R*-value) at a mean temperature of 75°F (24°C) 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 insulation boards must be attached to supports in a manner that will secure the insulation in place.

Under the IBC, protection against condensation must be provided in accordance with 2021 and 2018 IBC Section 1402.2 (2015 IBC Section 1403.2); under the IRC, a vapor retarder must be provided in accordance with IRC Section R702.7. The insulation boards must be covered by a water-resistive barrier complying with 2021 and 2018 IBC Section 1403.2 (2015 IBC Section 1404.2) or IRC Section R703.2, as applicable. Insulation boards must not be used as a nailing base for finish materials or wall covering materials. Fasteners and fastening methods for all exterior wall coverings over the insulation boards must be installed in accordance with 2021 and 2018 IBC Section 2603.11, 2603.12 or 2603.13 (2015 IBC Sections 2603.11 and 2603.12) and IRC Sections R703.15, R703.16 or R703.17, as applicable. All walls must be braced in accordance with IBC Section 2308.6 or IRC Section R602.10, as applicable. The boards must be covered on the outside with approved wall coverings that are structurally adequate to resist all required forces.

The insulation must be separated from the interior of the building by an approved code complying thermal barrier as required by IBC Section 2603.4, or IRC Section R316.4.

4.2 Attics and Crawl Spaces:

When the insulation boards are installed within attics and crawl spaces, where entry is made only for service of utilities, a code prescribed ignition barrier must be installed in accordance with IBC Section 2603.4.1.6 or IRC Section R316.5.3 or R316.5.4, as applicable. The ignition barrier must be consistent with the requirements of the type of construction required by the applicable code, and must be installed in a manner so that the foam plastic insulation is not exposed.

5.0 CONDITIONS OF USE:

The Alfaterm insulation boards 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 must comply with this report and the manufacturer's published instructions. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.2 The insulation boards must be covered with an approved exterior wall covering, including a water-resistive barrier complying with 2021 and 2018 IBC Section 1403.2 (2015 IBC Section 1404.2) or IRC Section R703.2, as applicable.
- 5.3 The insulation boards must not be used as a nailing base for exterior siding materials. All nailing must be into the wall framing as required by the siding manufacturer's instructions or the applicable code.
- 5.4 The insulation boards must be separated from the interior of the building by an approved thermal barrier in accordance with IBC Section 2603.4 or IRC Section R316.4, as applicable.
- 5.5 Use of the insulation board in areas where the probability of termite infestation is "very heavy" installation must be in accordance with IBC Section 2603.8 and IRC Section R318.4, as applicable.
- 5.6 Where required by the applicable code, a vapor retarder system, which may include the foam plastic insulation, must be installed in the exterior wall, floor, and/or roof ceiling assembly.
- 5.7 Jobsite certification and labeling of the insulation must comply with IBC Section N1101.10 or IECC Section C303.1 or R303.1.14 and R401.3, as applicable.

- 5.8 The insulation boards are produced by Poliestireno Alfa Gamma, S.A. De C.V. under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

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

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5173) along with the name, registered trademark, or registered logo of the report holder (Poliestireno Alfa Gamma, S.A. De C.V.) must be included in the product label.
- 7.2 In addition, the insulation boards are packaged in bundles that bear a label including the address of the report holder, the date of manufacture, the ASTM C578 type and the surface burning characteristics.
- 7.3 The report holder's contact information is the following:

POLIESTIRENO ALFA GAMMA S.A. DE C.V.
2493 ROLL DRIVE
210 PMB: 1232
SAN DIEGO, CALIFORNIA 92154
(714) 804 -8519
<https://www.pagfoam.com>

TABLE 1—THERMAL RESISTANCE (R-VALUES)

THICKNESS (inches)	R-VALUE [(°F-ft ² -hr)/BTU] at 75°F MEAN TEMPERATURE
1.0	4.0

For SI: 1 inch = 25.4 mm; 1 (°F-ft²-hr)/BTU = 0.176 K·m²/W

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 21 00—Thermal Insulation

Section: 07 22 00— Roof and Deck Insulation

REPORT HOLDER:

POLIESTIRENO ALFA GAMMA S.A. DE C.V.

EVALUATION SUBJECT:

ALFATERM, ALFATERM T&G, AND ALFATERM EIFS INSULATION BOARDS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Alfaterm, Alfaterm T&G and Alfaterm EIFS insulation boards, described in ICC-ES evaluation report [ESR-5173](#), have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2023 *City of Los Angeles Building Code* (LABC)
- 2023 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The Alfaterm, Alfaterm T&G and Alfaterm EIFS insulation boards, described in Sections 2.0 through 7.0 of the evaluation report [ESR-5173](#), comply with the LABC Section 2603 and LARC Section R316, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Alfaterm, Alfaterm T&G and Alfaterm EIFS insulation boards described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-5173](#).
- The installation, conditions of use and identification are in accordance with the 2021 *International Building Code*® (IBC) and 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report [ESR-5173](#).

This supplement expires concurrently with the evaluation report, issued August 2024.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**Section: 07 21 00—Thermal Insulation****Section: 07 22 00—Roof and Deck Insulation****REPORT HOLDER:****POLIESTIRENO ALFA GAMMA S.A. DE C.V.****EVALUATION SUBJECT:****ALFATERM, ALFATERM T&G, AND ALFATERM EIFS INSULATION BOARDS****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that Alfaterm, Alfaterm T&G and Alfaterm EIFS insulation boards, described in ICC-ES evaluation report ESR-5173, have also been evaluated for compliance with the codes noted below.

Applicable code edition(s):

- 2022 California Building Code (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 California Residential Code (CRC)
- 2022 California Energy Code (CEC)

2.0 CONCLUSIONS**2.1 CBC:**

The insulation boards, described in Sections 2.0 through 7.0 of the evaluation report ESR-5173, comply with the 2022 CBC, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of the 2022 CBC.

2.1.1 OSHPD: The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA: The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The insulation boards described in Sections 2.0 through 7.0 of the evaluation report ESR-5173, comply with the 2022 CRC, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of the 2022 CRC.

2.3 CEC:

The insulation boards, described in Section 2.0 through 7.0 of the evaluation report ESR-5173, comply with the 2022 CEC, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of the 2022 CEC, under the following condition:

- In accordance with Section 110.8 of the 2022 California Energy Code (CEC), verification of certification by the Department of Consumer Affairs, Bureau of Household Goods and Services, must be provided to the code official, demonstrating that the insulation conductive thermal performance is approved pursuant to the California Code of Regulations, Title 24, Part 12, Chapters 12-13, Article 3, "Standards for Insulating Materials." The certification must be verified with the DCA Bureau of Household Goods and Services using the following link to the bureau's Directory of Certified Insulation Materials: https://bhgs.dca.ca.gov/consumers/ti_directory.pdf

This supplement expires concurrently with the evaluation report, issued August 2024.