

### ESR-2784

Reissued April 2025	This report also contains:
	- City of LA Supplement
Subject to renewal April 2027	- CA Supplement w/ DSA and OSHPD

- FL Supplement w/ HVHZ

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DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION Section: 07 21 00— Thermal Insulation	REPORT HOLDER: BASF CORPORATION	EVALUATION SUBJECT: BASF NEOPOR® EXPANDABLE POLYSTYRENE BEADS F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 PLUS, F5200 PLUS BMB, F5300, F5300 BMB, F5300 PLUS AND F5300 PLUS BMB	
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## **1.0 EVALUATION SCOPE**

### Compliance with the following codes:

- 2024, 2021, 2018, 2015, 2012 and 2009 International Building Code® (IBC)
- 2024, 2021, 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2024, 2021, 2018, 2015, 2012 and 2009 International Energy Conservation Code® (IECC)
- 2013 Abu Dhabi International Building Code (ADIBC)<sup>†</sup>

<sup>†</sup>The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

### **Properties evaluated:**

- Physical properties
- Surface-burning characteristics
- Thermal resistance

## **2.0 USES**

The BASF expandable polystyrene beads designated as NEOPOR<sup>®</sup> F5Pro, NEOPOR<sup>®</sup> F5Pro BMB, NEOPOR<sup>®</sup> F2200, NEOPOR<sup>®</sup> F2200 BMB, NEOPOR<sup>®</sup> F2300, NEOPOR<sup>®</sup> F2300 BMB, NEOPOR<sup>®</sup> F2400, NEOPOR<sup>®</sup> F2400 BMB, NEOPOR<sup>®</sup> F5200 Plus, NEOPOR<sup>®</sup> F5200 Plus BMB, NEOPOR<sup>®</sup> F5300, NEOPOR<sup>®</sup> F5300, NEOPOR<sup>®</sup> F5300 BMB, NEOPOR<sup>®</sup> F5300 Plus and NEOPOR<sup>®</sup> F5300 Plus BMB are used by independent manufacturers to produce expanded polystyrene (EPS) insulation products.

## **3.0 DESCRIPTION**

The BASF NEOPOR® F5Pro, NEOPOR® F5Pro BMB, NEOPOR® F2200, NEOPOR® F2200 BMB, NEOPOR® F2300, NEOPOR® F2300 BMB, NEOPOR® F2400, NEOPOR® F2400 BMB, NEOPOR® F5200 Plus, NEOPOR® F5200 Plus BMB, NEOPOR® F5300, NEOPOR® F5300 BMB, NEOPOR® F5300 Plus and NEOPOR® F5300 Plus BMB beads have the same formulation of polystyrene, with the only difference being the diameter of the beads. The EPS insulation products manufactured with the expandable polystyrene beads



are produced solely through the introduction of heat, without other additives. This process expands the beads, which are then molded into insulation products with minimum densities and maximum thickness as specified in <u>Table 1</u>. The end use of the polystyrene beads, including the manufacture of products, is outside the scope of this report and must be addressed in a separate evaluation report.

Boards manufactured from BASF NEOPOR<sup>®</sup> F5Pro, NEOPOR<sup>®</sup> F5Pro BMB, NEOPOR<sup>®</sup> F2200, NEOPOR<sup>®</sup> F2200, BMB, NEOPOR<sup>®</sup> F2300, NEOPOR<sup>®</sup> F2300, NEOPOR<sup>®</sup> F2400, NEOPOR<sup>®</sup> F2400 BMB, NEOPOR<sup>®</sup> F5200 Plus, NEOPOR<sup>®</sup> F5200 Plus BMB, NEOPOR<sup>®</sup> F5300, NEOPOR<sup>®</sup> F5300 BMB, NEOPOR<sup>®</sup> F5300 Plus and NEOPOR<sup>®</sup> F5300 Plus BMB beads, at thicknesses and densities specified in <u>Table 1</u>, have a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 (UL 723). Thicknesses of up to 12 inches (304.8 mm) in walls and ceilings are evaluated when the EPS is separated from the interior of the building by minimum <sup>5</sup>/<sub>8</sub>-inch-thick (19.1 mm), Type X gypsum board complying with ASTM C1396, attached in accordance with the applicable code.

BASF NEOPOR<sup>®</sup> F2200, NEOPOR<sup>®</sup> F2200 BMB, NEOPOR<sup>®</sup> F2300, NEOPOR<sup>®</sup> F2300 BMB, NEOPOR<sup>®</sup> F2400 and NEOPOR<sup>®</sup> F2400 BMB expandable polystyrene beads have been qualified in accordance with Section 4.5.15.1.1 of the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12). The expandable beads can be used to produce EPS products that comply with Types II, VIII and IX [1.35, 1.15 and 1.80 pcf (22, 18 and 29 kg/m<sup>3</sup>) minimum densities, respectively] of ASTM C578, provided the final product is listed in a current ICC-ES evaluation report and has been qualified in accordance with Section 4.5.15.1.2 of AC12.

BASF NEOPOR<sup>®</sup> F5200 Plus, NEOPOR<sup>®</sup> F5200 Plus BMB, NEOPOR<sup>®</sup> F5300 Plus and NEOPOR<sup>®</sup> F5300 Plus BMB expandable polystyrene beads have been qualified in accordance with Section 4.5.15.1.1 of the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12). The expandable beads can be used to produce EPS products that comply with Type XI, I, VIII, II and IX [0.70, 0.90, 1.15, 1.35 and 1.80 pcf (12, 14, 22, 18 and 29 kg/m<sup>3</sup>) minimum density] of ASTM C578 (see <u>Table 1</u>), provided the final product is listed in a current ICC-ES evaluation report and has been qualified in accordance with Section 4.5.15.1.2 of AC12.

BASF NEOPOR<sup>®</sup> F5Pro, NEOPOR F5Pro BMB, NEOPOR<sup>®</sup> F5300 and NEOPOR<sup>®</sup> F5300 BMB expandable polystyrene beads have been qualified in accordance with Section 4.5.15.1.1 of the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12). The expandable beads can be used to produce EPS products that comply with Types I, II, VIII, IX, XIV and XV [0.90, 1.35, 1.15, 1.80, 2.40 and 3.00 pcf (14, 22, 18, 29, 38 and 48 kg/m<sup>3</sup>) minimum densities, respectively] of ASTM C578 (see <u>Tables 1</u> and <u>2</u>), provided the final product is listed in a current ICC-ES evaluation report and has been qualified in accordance with Section 4.5.15.1.2 of AC12.

The *R*-values noted in <u>Table 3</u> are only applicable to EPS products produced from BASF NEOPOR<sup>®</sup> F5Pro, NEOPOR<sup>®</sup> F5Pro BMB, NEOPOR<sup>®</sup> F2200, NEOPOR<sup>®</sup> F2200 BMB, NEOPOR<sup>®</sup> F2300, NEOPOR<sup>®</sup> F2300 BMB, NEOPOR<sup>®</sup> F2400, NEOPOR<sup>®</sup> F2400 BMB, NEOPOR<sup>®</sup> F5300 and NEOPOR<sup>®</sup> F5300 BMB beads with the EPS products listed with the noted *R*-values in a current ICC-ES evaluation report.

The *R*-values noted in <u>Table 4</u> are only applicable to EPS products produced from BASF NEOPOR<sup>®</sup> F5200 Plus, NEOPOR<sup>®</sup> F5200 Plus BMB, NEOPOR<sup>®</sup> F5300 Plus and NEOPOR<sup>®</sup> F5300 Plus BMB beads with the EPS products listed with the noted *R*-values in a current ICC-ES evaluation report.

NEOPOR<sup>®</sup> F5Pro, NEOPOR<sup>®</sup> F5Pro BMB, BASF NEOPOR<sup>®</sup> F5200 Plus, NEOPOR<sup>®</sup> F5200 Plus BMB, NEOPOR<sup>®</sup> F5300 Plus and NEOPOR<sup>®</sup> F5300 Plus BMB expandable polystyrene beads that comply with Types I, II, VII, IX and XI of ASTM C578 have a water absorption rate no greater than 0.3% when tested in accordance with ASTM C272 complying with ASHRAE 90.1 Section 5.8.1.7.3 as referenced by Section C401.2.2 of the 2024, 2021 IECC [Section C401.2 of the 2018, 2015 and 2012 of IECC (Section 501.2 of the 2009 of IECC)].

The products must comply with ICC-ES qualification and labeling requirements, and must be manufactured under a quality control system meeting both BASF specifications and ICC-ES requirements.

## 4.0 INSTALLATION

### 4.1 General:

Installation must be as noted in the corresponding current ICC-ES evaluation report on the EPS insulation product, or as otherwise permitted by the code official under Section 2603 of the IBC or Section R303 of the 2024 IRC (Section R316 of the 2021, 2018, 2015, 2012 and 2009 IRC), as applicable.

### 4.2 Attics and Crawl Spaces:

EPS insulation products produced from the EPS beads of the resin type, density, and thickness shown in <u>Table 2</u> of this report can be used on walls in attics and foundation walls in crawl spaces without a codeprescribed ignition barrier applied to the attic or crawl space side of the foam plastic, provided all of the following conditions are met:

- a. Entry to the attic or crawl space is only to service utilities, and no storage is permitted.
- b. There are no interconnected attic or crawl space areas.
- c. Attic ventilation is provided when required by 2024, 2021 and 2018 IBC Section 1202.2 (2015, 2012 and 2009 IBC Section 1203.2) or IRC Section R806, as applicable, except for unvented attic assemblies as permitted under the conditions prescribed in 2024, 2021, 2018 and 2015 IBC Section 1202.3 or 2024, 2021, 2018, 2015 and 2012 IRC Section R806.5 (2009 IRC Section R806.4) when included in the scope of the independent manufacturer's insulation board evaluation report.
- d. Under-floor (crawl space) ventilation is provided when required by 2024, 2021 and 2018 IBC Section 1202.4 [2015 IBC Section 1203.4 (2012 and 2009 IBC Section 1203.3)] or 2024 IRC Section R408.2 (2021, 2018, 2015, 2012 and 2009 IRC Section R408.1), as applicable, except for unvented crawl spaces as permitted under the conditions prescribed in 2024, 2021, 2018, 2015 and 2012 IRC R408.3 when included in the scope of the independent manufacturer's insulation board evaluation report
- e. Combustion air is provided in accordance with Section 701 of the International Mechanical Code®.

f.The EPS type and maximum thickness are as specified in Table 2.

# **5.0 CONDITIONS OF USE:**

The BASF NEOPOR<sup>®</sup> Expandable Polystyrene Beads 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** The minimum density and maximum thickness of the foam plastic insulation products manufactured from the expanded beads are as noted in <u>Table 1</u> of this report.
- **5.2** Products manufactured from the beads must be listed in a current ICC-ES evaluation report.
- **5.3** Except as noted in Section 4.2 of this report, the EPS insulation products produced from the EPS beads must be separated from the building interior by a thermal barrier complying with IBC Section 2603.4 or 2024 IRC Section R303.4 (2021, 2018, 2015, 2012 and 2009 IRC Section R316.4) or as applicable.
- 5.4 The beads are produced under a quality control program with inspections 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 June 2024).
- 6.2 Data in accordance with NFPA 286.
- 6.3 Data in accordance with ASTM E2178.
- 6.4 Data in accordance with ASTM C272.

# 7.0 IDENTIFICATION

- **7.1** The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-2784) along with the name, registered trademark, or registered logo of the report holder (BASF Corporation) must be included in the product label.
- **7.2** Each container of beads bears a label with the manufacturer's name (BASF SE or BASF Company Ltd.) and address and the bead identification series.
- **7.3** The report holder's contact information is the following.

BASF CORPORATION 11750 KATY FREEWAY HOUSTON, TEXAS 77079 (908) 420-7211 www.neopor-insulation.com

NEOPOR <sup>®</sup> GRADE DESIGNATION	ASTM C578 EPS TYPE	MINIMUM DENSITY (pcf)	MAXIMUM THICKNESS (INCHES)
F5200 Plus, F5200 Plus BMB, F5300 Plus, F5300 Plus BMB	XI	0.70	6
F5Pro, F5Pro BMB, F5200 Plus, F5200 Plus BMB, F5300, F5300 BMB, F5300 Plus, F5300 Plus BMB	L	0.90	6
F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 Plus, F5200 Plus BMB, F5300, F5300 BMB, F5300 Plus, F5300 Plus BMB	VIII	1.15	6
F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 Plus, F5200 Plus BMB, F5300, F5300 BMB, F5300 Plus, F5300 Plus BMB	II	1.35	6
NEOPOR <sup>®</sup> F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 Plus, F5200 Plus BMB, F5300, F5300 BMB, F5300 Plus, F5300 Plus BMB	IX	1.80	6
NEOPOR <sup>®</sup> F5Pro, F5Pro BMB, F5300, F5300 BMB	XIV	2.40	6
NEOPOR <sup>®</sup> F5Pro, F5Pro BMB, F5300, F5300 BMB	XV	3.00	6

#### TABLE 1-MINIMUM INSULATION BOARD DENSITY AND MAXIMUM THICKNESS

For SI: 1 inch = 25.4 mm, 1 pcf = 16.02 kg/m<sup>3</sup>.

<sup>1</sup>Except as noted in Section 3.0.

#### TABLE 2—TYPE AND MAXIMUM THICKNESS FOR EPS PRODUCTS USED IN ATTICS OR CRAWL SPACES<sup>1,2</sup>

NEOPOR® GRADE DESIGNATION	ASTM C578 EPS TYPE	MAXIMUM THICKNESS (INCHES)
F5200 Plus, F5200 Plus BMB, F5300 Plus, F5300 Plus BMB	XI	5.0
F5Pro, F5Pro BMB, F5200 Plus, F5200 Plus BMB, F5300, F5300 BMB, F5300 Plus, F5300 Plus BMB	I	4.0
F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 Plus, F5200 Plus BMB, F5300, F5300 BMB, F5300 Plus, F5300 Plus BMB	VIII	3.2
F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 Plus, F5200 Plus BMB, F5300, F5300 BMB, F5300 Plus, F5300 Plus BMB	II	2.66
F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 Plus, F5200 Plus BMB, F5300, F5300 BMB, F5300 Plus, F5300 Plus BMB	IX	2

For SI: 1 inch = 25.4 mm, 1 pcf = 16.02 kg/m<sup>3</sup>.

<sup>1</sup>The expandable beads can be used to produce EPS products that are air-impermeable in accordance with 2024, 2021, 2018 and 2015 IBC Section 1202.3 or 2024, 2021, 2018, 2015 and 2012 IRC Section R806.5 (2009 IRC Section R806.4). The final product must be laminated on both sides and must be the subject of a current ICC-ES evaluation report that includes evaluation in accordance ASTM E2178 or ASTM E283 as specified in Section 4.5.11.6 of AC12. <sup>2</sup>The expandable beads can be used to produce EPS products that are used in walls in attics and foundation walls in crawl spaces without a code-prescribed ignition barrier under the conditions described in Section 4.2 of this report. The boards must be the subject of a current ICC-ES evaluation report that includes evaluation

in accordance with Appendix A Sections A1.2.1 and/or A2.2.1 of AC12.

# TABLE 3—MINIMUM DENSITY AND *R*-VALUE (F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5300, F5300 BMB)

ASTM C578 EPS TYPE	<i>R</i> -VALUE (°F-ft <sup>2</sup> -h/Btu) 75°F MEAN TEMP. <sup>1</sup>	R-VALUE (°F-ft <sup>2</sup> -h/Btu) 40°F MEAN TEMP. <sup>1</sup>
I	4.5	4.7
VIII	4.5	4.8
Ш	4.5	4.9
II – High Density	4.6	4.9
IX	4.6	4.9
XIV	4.5	—
XV	4.4	—

For SI: 1 inch = 25.4 mm, 1 pcf = 16.02 kg/m<sup>3</sup>, 1 °F-ft<sup>2</sup>-h/Btu = 0.176 m<sup>2</sup>-K/W.

<sup>1</sup> Based on a tested thickness of 1.0 inch.

#### TABLE 4-MINIMUM DENSITY AND R-VALUE (F5200 PLUS, F5200 PLUS BMB, F5300 PLUS, F5300 PLUS BMB)

ASTM C578 EPS TYPE	<i>R</i> -VALUE (°F-ft²-h/Btu) 75°F MEAN TEMP. <sup>1</sup>	<i>R</i> -VALUE (°F-ft <sup>2</sup> -h/Btu) 75°F MEAN TEMP. <sup>2</sup>
XI	4.6	NA
I	4.7	5.0
VIII	4.7	5.0
II	4.7	5.0
II – High Density	4.7	5.0
IX	4.7	5.0

For **SI:** 1 inch = 25.4 mm, 1 pcf = 16.02 kg/m<sup>3</sup>, 1 °F-ft<sup>2</sup>-h/Btu = 0.176 m<sup>2</sup>-K/W.

NA – Not applicable

<sup>1</sup> Based on a tested thickness of 1.0 inch.

<sup>2</sup> Based on a tested thickness of 1.0625 inch.



# **ESR-2784 City of LA Supplement**

Reissued April 2025 This report is subject to renewal April 2027.

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#### DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECITON Section: 07 21 00—Thermal Insulation

**REPORT HOLDER:** 

BASF CORPORATION

### **EVALUATION SUBJECT:**

# BASF NEOPOR<sup>®</sup> EXPANDABLE POLYSTYRENE BEADS F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 PLUS, F5200 PLUS BMB, F5300, F5300 BMB, F5300 PLUS AND F5300 PLUS BMB

#### 1.0 REPORT PURPOSE AND SCOPE

#### Purpose:

The purpose of this evaluation report supplement is to indicate that BASF Neopor® Expandable Polystyrene Beads NEOPOR® F5Pro, NEOPOR® NEOPOR® F2200, NEOPOR® F2200 BMB, NEOPOR® F2300, NEOPOR® F2300 BMB, NEOPOR® F2400, NEOPOR® F2400 BMB, NEOPOR® F5200 Plus, NEOPOR® F5200 Plus BMB, NEOPOR® F5300, NEOPOR® F5300 BMB, NEOPOR® F5300 Plus and NEOPOR® F5300 Plus BMB, described in ICC-ES evaluation report <u>ESR-2784</u>, for use by independent manufacturers to produce expanded polystyrene (EPS) rigid foam insulation boards, 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 BASF Neopor® Expandable Polystyrene Beads NEOPOR® F5Pro, NEOPOR® F5Pro BMB, NEOPOR® F2200, NEOPOR® F2200 BMB, NEOPOR® F2300, NEOPOR® F2300 BMB, NEOPOR® F2400, NEOPOR® F2400 BMB, NEOPOR® F5200 Plus, NEOPOR® F5200 Plus BMB, NEOPOR® F5300, NEOPOR® F5300 BMB, NEOPOR® F5300 Plus and NEOPOR® F5300 Plus BMB, described in Sections 2.0 through 7.0 of the evaluation report <u>ESR-2784</u>, and the ICC-ES certified expanded polystyrene (EPS) rigid foam insulation boards produced from these beads, comply with the LABC Section 2603 and LARC Section R316, and are subjected to the conditions of use described in this supplement.

#### 3.0 CONDITIONS OF USE

The BASF Neopor® Expandable Polystyrene Beads NEOPOR® F5Pro, NEOPOR® F5Pro BMB, NEOPOR® F2200, NEOPOR® F2200 BMB, NEOPOR® F2300, NEOPOR® F2300 BMB, NEOPOR® F2400, NEOPOR® F2400 BMB, NEOPOR® F5200 Plus, NEOPOR® F5200 Plus BMB, NEOPOR® F5300, NEOPOR® F5300 BMB, NEOPOR® F5300 Plus and NEOPOR® F5300 Plus BMB, described in this evaluation report supplement must comply with the following condition:

• All applicable sections in the evaluation report ESR-2784.

The ICC-ES certified expanded polystyrene (EPS) rigid foam insulation boards produced by independent manufacturers from BASF Neopor® Expandable Polystyrene Beads NEOPOR® F5Pro, NEOPOR® F5Pro BMB, NEOPOR® F2200, NEOPOR® F2200 BMB, NEOPOR® F2300, NEOPOR® F2300 BMB, NEOPOR® F2400, NEOPOR® F2400 BMB, NEOPOR® F5200 Plus, NEOPOR® F5200 Plus BMB, NEOPOR® F5300, NEOPOR® F5300 BMB, NEOPOR® F5300 Plus and NEOPOR® F5300 Plus BMB, must comply with all of the following conditions:

- All applicable sections in the ICC-ES evaluation report for the expanded polystyrene (EPS) rigid foam insulation boards.
- The installation, conditions of use and identification are in accordance with the 2021 *International Building Code*<sup>®</sup> (2021 IBC) and 2021 *International Residential Code*<sup>®</sup> (2021 IRC) provisions noted in the ICC-ES evaluation report for the expanded polystyrene (EPS) rigid foam insulation boards.

This supplement expires concurrently with the evaluation report, reissued April 2025.

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# **ESR-2784 CA Supplement**

w/ DSA and OSHPD Reissued April 2025 This report is subject to renewal April 2027.

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

**REPORT HOLDER:** 

BASF CORPORATION

#### **EVALUATION SUBJECT:**

# BASF NEOPOR<sup>®</sup> EXPANDABLE POLYSTYRENE BEADS F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 PLUS, F5200 PLUS BMB, F5300, F5300 BMB, F5300 PLUS AND F5300 PLUS BMB

#### 1.0 REPORT PURPOSE AND SCOPE

#### **Purpose:**

The purpose of this evaluation report supplement is to indicate that BASF Neopor<sup>®</sup> Expandable Polystyrene Beads Neopor<sup>®</sup> F5Pro, Neopor<sup>®</sup> F5Pro BMB, Neopor<sup>®</sup> F2200, Neopor<sup>®</sup> F2200 BMB, Neopor<sup>®</sup> F2300, Neopor<sup>®</sup> F2300 BMB, Neopor<sup>®</sup> F2400, Neopor<sup>®</sup> F2400 BMB, Neopor<sup>®</sup> F5200 Plus, Neopor<sup>®</sup> F5200 Plus BMB, Neopor<sup>®</sup> F5300, Neopor<sup>®</sup> F5300 BMB, Neopor<sup>®</sup> F5300 Plus and Neopor<sup>®</sup> F5300 Plus BMB, described in ICC-ES evaluation report ESR-2784, for use by independent manufacturers to produce expanded polystyrene (EPS) rigid foam insulation boards, have also been evaluated for compliance with the codes noted below, provided the insulation products are described in an ICC-ES evaluation report with a CBC and CRC Supplement.

#### Applicable code editions:

■ 2022 California Building Code (CBC)

For evaluation of applicable chapters adopted by the <u>California Office of Statewide Health Planning and Development</u> (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architects (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 BASF Neopor<sup>®</sup> Expandable Polystyrene Beads Neopor<sup>®</sup> F5Pro, Neopor<sup>®</sup> F5Pro BMB, Neopor<sup>®</sup> F2200, Neopor<sup>®</sup> F2200 BMB, Neopor<sup>®</sup> F2300 BMB, Neopor<sup>®</sup> F2400, Neopor<sup>®</sup> F2400 BMB, Neopor<sup>®</sup> F5200 Plus, Neopor<sup>®</sup> F5200 BMB, Neopor<sup>®</sup> F5300 BMB, Neopor<sup>®</sup> F5300 Plus and Neopor<sup>®</sup> F5300 Plus BMB, described in Sections 2.0 through 7.0 of the evaluation report ESR-2784, comply with the 2022 *California Building Code* (CBC), and the insulation boards produced from these beads also comply with the 2022 CBC, provided the insulation boards are described in an ICC-ES evaluation report with a CBC Supplement and are installed in accordance with the 2021 *International Building Code*<sup>®</sup> (IBC) provisions, as applicable, of the evaluation report and the additional requirements of the 2022 CBC.

### 2.1.1 OSHPD:

The BASF Neopor® Expandable Polystyrene Beads Neopor® F5Pro, Neopor® F5Pro BMB, Neopor® F2200, Neopor® F2200 BMB, Neopor® F2300, Neopor® F2300 BMB, Neopor® F2400, Neopor® F2400 BMB, Neopor® F5200 Plus, Neopor F5200® Plus BMB, Neopor® F5300, Neopor® F5300 BMB, Neopor® F5300 Plus and Neopor® F5300 Plus BMB, described in Sections 2.0 through 7.0 of the evaluation report ESR-2784, and the ICC-ES certified expanded polystyrene (EPS) rigid foam insulation boards produced from these beads described in an ICC-ES evaluation report with a CBC Supplement, comply with CBC Section 803.4 [OSHPD 1,1R, 2, 4 and 5] and amended CBC Chapter 26 [OSHPD 1, 1R, 2, 3, 4 and 5], and the insulation boards produced from these beads also comply with these 2022 CBC OSHPD requirements, provided the insulation boards are described in an ICC-ES supplement that includes OSHPD requirements within the scope.

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### 2.1.2 DSA:

The BASF Neopor<sup>®</sup> Expandable Polystyrene Beads Neopor<sup>®</sup> F5Pro, Neopor<sup>®</sup> F5Pro BMB, Neopor<sup>®</sup> F2200,Neopor<sup>®</sup> F220 BMB, Neopor<sup>®</sup> F2300, Neopor<sup>®</sup> F2300 BMB, Neopor<sup>®</sup> F2400, Neopor<sup>®</sup> F2400 BMB, Neopor<sup>®</sup> F5200 Plus, Neopor<sup>®</sup> F5200 Plus BMB, Neopor<sup>®</sup> F5300, Neopor<sup>®</sup> F5300 BMB, Neopor<sup>®</sup> F5300 Plus and Neopor<sup>®</sup> F5300 Plus BMB, described in Sections 2.0 through 7.0 of the evaluation report ESR-2784, comply with CBC Section 803.4 [DSA-SS and DSA-SS/CC] and amended CBC Chapter 26 [DSA-SS and DSA-SS/CC], and the insulation boards produced from these beads also comply with these 2022 CBC DSA requirements, provided the insulation boards are described in an ICC-ES evaluation report with a CBC Supplement that includes DSA requirements within the scope.

### 2.2 CRC:

The BASF Neopor® Expandable Polystyrene Beads Neopor® F5Pro, Neopor® F5Pro BMB, Neopor® F2200, Neopor® F2200 BMB, Neopor® F2300, Neopor® F2300 BMB, Neopor® F2400, Neopor® F2400 BMB, Neopor® F5200 Plus, Neopor® F5200 Plus BMB, Neopor® F5300, Neopor® F5300 BMB, Neopor® F5300 Plus and Neopor® F5300 Plus BMB, described in Sections 2.0 through 7.0 of the evaluation report ESR-2784, comply with 2022 *California Residential Code* (CRC), and the insulation boards produced from these beads also comply with the 2022 CRC, provided the insulation boards are described in an ICC-ES evaluation report with a CRC Supplement and are installed in accordance with the 2021 *International Residential Code* (IRC) provisions, as applicable, of the evaluation report and the additional requirements of the 2022 CRC.

#### 2.3 CEC:

The BASF Neopor® Expandable Polystyrene Beads Neopor® F5Pro, Neopor® F5Pro BMB, Neopor® F2200, Neopor® F2200 BMB, Neopor® F2300, Neopor® F2300 BMB, Neopor® F2400, Neopor® F2400 BMB, Neopor® F5200 Plus, Neopor® F5200 Plus, Neopor® F5300 Plus BMB, Neopor® F5300, Neopor® F5300 BMB, Neopor® F5300 Plus and Neopor® F5300 Plus BMB, described in Sections 2.0 through 7.0 of the evaluation report ESR-2784, comply with 2022 *California Energy Code* (CEC), and the insulation boards produced from these beads also comply with the 2022 CEC, provided the insulation boards are described in an ICC-ES evaluation report with a CEC Supplement and are installed in accordance with the 2022 *International Building Code*® (IBC) or 2022 *International Residential Code* (IRC) provisions, as applicable, of 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 Home Furnishings and Thermal Insulation, must be provided to the code official, demonstrating that the expanded polystyrene (EPS) rigid foam insulation boards conductive thermal performance is approved pursuant to the California Code of Regulations, Title 24, Part 12, Chapters 12-13, Article 3, "Standards for Insulating Material."

This supplement expires concurrently with the evaluation report, reissued April 2025.



# ESR-2784 FL Supplement w/ HVHZ

Reissued April 2025 This report is subject to renewal April 2027.

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

**REPORT HOLDER:** 

BASF CORPORATION

**EVALUATION SUBJECT:** 

BASF NEOPOR<sup>®</sup> EXPANDABLE POLYSTYRENE BEADS F5Pro, F5Pro BMB, F2200, F2200 BMB, F2300, F2300 BMB, F2400, F2400 BMB, F5200 PLUS, F5200 PLUS BMB, F5300, F5300 BMB, F5300 PLUS AND F5300 PLUS BMB

#### 1.0 REPORT PURPOSE AND SCOPE

#### Purpose:

The purpose of this evaluation report supplement is to indicate that BASF NEOPOR<sup>®</sup> Expandable Polystyrene Beads NEOPOR<sup>®</sup> F5Pro, NEOPOR<sup>®</sup> F5Pro BMB, NEOPOR<sup>®</sup> F2200, NEOPOR<sup>®</sup> F2200 BMB, NEOPOR<sup>®</sup> F2300, NEOPOR<sup>®</sup> F2300 BMB, NEOPOR<sup>®</sup> F2400, NEOPOR<sup>®</sup> F2400 BMB, NEOPOR<sup>®</sup> F5200 Plus, NEOPOR<sup>®</sup> F5200 Plus BMB, NEOPOR<sup>®</sup> F5300, NEOPOR<sup>®</sup> F5300 BMB, NEOPOR<sup>®</sup> F5300 Plus and NEOPOR<sup>®</sup> F5300 Plus BMB, described in ICC-ES evaluation report ESR-2784, have also been evaluated for compliance with the codes noted below.

#### Applicable code editions:

- 2023 Florida Building Code—Building
- 2023 Florida Building Code—Residential

#### 2.0 CONCLUSIONS

The BASF NEOPOR<sup>®</sup> Expandable Polystyrene Beads NEOPOR<sup>®</sup> F5Pro, NEOPOR<sup>®</sup> F5Pro BMB, NEOPOR<sup>®</sup> F2200, NEOPOR<sup>®</sup> F2200 BMB, NEOPOR<sup>®</sup> F2300, NEOPOR<sup>®</sup> F2300 BMB, NEOPOR<sup>®</sup> F2400, NEOPOR<sup>®</sup> F2400 BMB, NEOPOR<sup>®</sup> F5200 Plus, NEOPOR<sup>®</sup> F5200 Plus BMB, NEOPOR<sup>®</sup> F5300, NEOPOR<sup>®</sup> F5300 BMB, NEOPOR<sup>®</sup> F5300 Plus, and NEOPOR<sup>®</sup> F5300 BMB described in Sections 2.0 through 7.0 of the evaluation report ESR-2784, comply with the *Florida Building Code*—*Residential*, as applicable. The design requirements shall be determined in accordance with the *Florida Building Code*—*Building* or the *Florida Building Code*—*Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-2784 for the 2021 *International Building Code*<sup>®</sup> meet the requirements of the *Florida Building Code*—*Residential*, as applicable, with the following condition:

The products manufactured from the beads must be described in a current ICC-ES evaluation report that has a current *Florida Building Code* Supplement.

Use of the BASF NEOPOR<sup>®</sup> Expandable Polystyrene Beads NEOPOR<sup>®</sup> F5Pro, NEOPOR<sup>®</sup> F5Pro BMB, NEOPOR<sup>®</sup> F2200, NEOPOR<sup>®</sup> F2200 BMB, NEOPOR<sup>®</sup> F2300, NEOPOR<sup>®</sup> F2300 BMB, NEOPOR<sup>®</sup> F2400, NEOPOR<sup>®</sup> F2400 BMB, NEOPOR<sup>®</sup> F5200 Plus, NEOPOR<sup>®</sup> F5200 Plus BMB, NEOPOR<sup>®</sup> F5300, NEOPOR<sup>®</sup> F5300 BMB, NEOPOR<sup>®</sup> F5300 Plus and NEOPOR<sup>®</sup> F5300 Plus BMB have also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building and Florida Building Code—Residential*.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued April 2025.

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