

BUILDING PRODUCTS LISTING PROGRAM

Customer: BASF Corporation
Class: Thermal Insulation USA
Location: Wyandotte, Michigan
Website: www.neopor.basf.us

Listing No. B1055-1
Project No. B1055-1 Edition 3

Effective Date: December 20, 2012
Last Revised Date: August 10, 2016
Expires: N/A

Standards: ASTM C578 *“Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation”.*
ASTM C518 *“Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus”.*
ASTM E84 *“Standard Test Method for Surface Burning Characteristics of Building Materials”.*
NFPA 286 *“Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth”.*

Product: NEOPOR® F2200, NEOPOR® F2300, NEOPOR® F2400, NEOPOR® F5300, NEOPOR® F5300 Plus Expandable Polystyrene Beads

Markings: Products are marked in a permanent manner where it is readily visible after installation with the following:

- Manufacturer’s name and trademark
- Bead Designation
- Charge Number
- QAI logo with ‘c’ and ‘us’ identifier
- QAI file Number: B1055-1

Labels are applied to octabins delivered to Expanded Polystyrene Molders for the manufacture of rigid thermal EPS insulation products.

Models / Ratings: The following outlines BASF NEOPOR® specifications.

Physical Properties for NEOPOR® F2200, NEOPOR® F2300, NEOPOR® F2400, NEOPOR® F5300, NEOPOR® F5300 Plus accordance with ASTM C578.



Property	Bead Grade(s) F5300, F5300 Plus	Bead Grade(s) F5300, F5300 Plus, F2200, F2300, F2400	Bead Grade(s) F5300, F5300 Plus, F2200, F2300, F2400	Bead Grade(s) F5300, F5300 Plus, F2200, F2300, F2400
	Type I	Type VIII	Type II	Type IX
Compressive Strength Minimum @ 10% Deformation (psi)	10.0	13.0	15.0	25.0
Thermal Resistance Minimum @ 1 inch Thick (F*ft²*h/Btu)	See Table Below	See Table Below	See Table Below	See Table Below
Flexural Strength Minimum (psi)	25.0	30.0	35.0	50.0
Water Vapor Permeance @ 1 inch Thickness Maximum (Perms)	5.0	3.5	3.5	2.5
Water Absorption By Volume Maximum (%)	4.0	3.0	3.0	2.0
Dimensional Stability Linear Change Maximum (%)	2.0	2.0	2.0	2.0
Oxygen Index Minimum (%)	24.0	24.0	24.0	24.0
Density Minimum (lbs/ft³)	0.95	1.15	1.35	1.80

Surface Burning Characteristics for NEOPOR® F2200, NEOPOR® F2300, NEOPOR® F2400, NEOPOR® F5300, NEOPOR® F5300 Plus in accordance with ASTM E84¹

Bead Grade(s)	Flame Spread Index Maximum	Smoke Developed Index Maximum	Thickness Maximum (inches)	Density Maximum (lb/ft ³)
NEOPOR® F2200, F2300, F2400, F5300, F5300 Plus	< 25	< 450	6	2.0

¹Ceiling measurement only. This measurement is conducted through determination of flame spread index and smoke developed index with the removal of any contribution of molten materials ignited on the floor of the tunnel assembly

Thermal Resistance Properties for NEOPOR® F2200, NEOPOR® F2300, NEOPOR® F2400, NEOPOR® F5300 in accordance with ASTM C518



Bead Grade(s) and EPS Type	Minimum Density lb/ft ³ (kg/m ³)	Thermal Resistance @ 1 inch (25 mm) Thickness at 75°F (23°C) Mean Temperature F*ft ² *h/Btu (K*m ² /W)	Thermal Resistance @ 1 inch (25 mm) Thickness at 40°F (4°C) Mean Temperature F*ft ² *h/Btu (K*m ² /W)
NEOPOR® F5300 Type I	0.95 (15)	4.3 (0.76)	4.7 (0.83)
NEOPOR® F5300, F2200, F2300, F2400 Type VIII	1.15 (18)	4.5 (0.79)	4.8 (0.84)
NEOPOR® F5300, F2200, F2300, F2400 Type II	1.35 (22)	4.5 (0.79)	4.9 (0.86)
NEOPOR® F5300, F2200, F2300, F2400 Type II	1.45 (23)	4.6 (0.81)	4.9 (0.86)
NEOPOR® F5300, F2200, F2300, F2400 Type IX	1.80 (29)	4.6 (0.81)	4.9 (0.86)

Thermal Resistance Properties for NEOPOR® F5300 Plus in accordance with ASTM C518

Bead Grade(s) and EPS Type	Minimum Density lb/ft ³ (kg/m ³)	Thermal Resistance @ 1 inch (25 mm) Thickness at 75°F (23°C) Mean Temperature F*ft ² *h/Btu (K*m ² /W)	Thermal Resistance @ 1-1/6 inch (27mm) Thickness at 75°F (23°C) Mean Temperature F*ft ² *h/Btu (K*m ² /W)
NEOPOR® F5300 Plus Type I	0.95 (15)	4.7 (0.83)	5.0 (0.88)
NEOPOR® F5300 Plus Type VIII	1.15 (18)	4.7 (0.83)	5.0 (0.88)
NEOPOR® F5300 Plus Type II	1.35 (22)	4.7 (0.83)	5.0 (0.88)

NEOPOR® F5300 Plus Type II	1.45 (23)	4.7 (0.83)	5.0 (0.88)
NEOPOR® F5300 Plus Type IX	1.80 (29)	4.7 (0.83)	5.0 (0.88)

Notes: For thicknesses from 6 – 12 inches, EPS insulation manufactured from NEOPOR® F5300, NEOPOR® F5300 Plus, NEOPOR® F2200, NEOPOR® F2300, NEOPOR® F2400 at a maximum density of 2.0 lbs/ft³ meets NFPA 286 for 15 minutes duration when installed in wall and roof or ceiling applications, where protected by a thermal barrier of 5/8 inch thick Type X gypsum wall board complying with ASTM C1363, installed in accordance with the application model code, as required by Section 2603.9 of the International Building Code 2012. Thickness less than 6 inches meets requirements for use when protected by the minimum prescribed code approved thermal barrier.

Final acceptance of the product in the intended application is to be determined by the authority having jurisdiction.

Use, on product and packaging labeling, of the increased R-values noted above require qualification at the EPS Molder location by QAI Laboratories under the BASF Brand Marketing Program.

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing Mark are considered to be listed by QAI. No warrantee is expressed or implied, and no guarantee is provided that any jurisdictional authority will accept the Listing found herein. The appropriate authorities should be contacted regarding the acceptability of any given Listing. Visit the QAI Online Listing Directory located at www.qai.org for the most up to date version of this Listing and to validate that this QAI Listing is active. Questions regarding this listing may be directed to info@qai.org. Please include the listing number in the request.
