

# Neopor<sup>®</sup> expandable polystyrene Product Series

## Application

Neopor is used to manufacture silver-grey colored foam that has considerably better thermal insulation capacity than conventional EPS products. The intended uses of each product grade are outlined in Table 1.

## Description

Neopor expandable polystyrene (EPS) contains approximately 6.0 wt% pentane as the blowing agent.

All products are supplied as spherical beads with a bulk density of approximately 40 lbs·ft<sup>-3</sup> (640 kg·m<sup>-3</sup>). The bead size range for each product is shown in Table 2.

Neopor products are compatible with many anti-stat and mineral oil additives that can be added during processing.

## Application Compliance

EPS foams manufactured from Neopor comply with surface burning characteristics (ASTM E-84) and physical property (ASTM C-578) requirements. Product meets all building codes requirements pending ESR approval for Type II\*.

Technical specifications for the Neopor products are listed in Table 2.

\*For particular approval types, please contact Product Manager.

## Packaging and storage

Neopor products are packaged in octabins of 500 lbs (1,100 kgs). Plastic liners are used to maintain product shelf life by retaining the blowing agent.

We recommend using opaque white or light colored **non-transparent** film for packaging Neopor sheets.

**Table 1**

Product	Intended uses
Neopor 2200	For blocks and thick-walled shapes
Neopor 2300	For blocks and shape molding with wall thicknesses over 8mm
Neopor 2400	Shape molding applications with wall thicknesses over 6mm

**Table 2: Technical Product Specifications**

Product	Pentane Content	Moisture Content	Bead Size	
Neopor 2200	5.5 – 6.0%	3.0% max	>2.5 mm 1.25 – 2.5mm <1.25 mm	2% max 97% min 2% max
Neopor 2300	5.5 – 6.0%	3.0% max	>1.6 mm 0.7 – 1.6 mm <0.8 mm	2% max 96% min 2% max
Neopor 2400	5.5 – 6.0%	3.0% max	>0.9 mm 0.4 – 0.9 mm <0.4 mm	2% max 96% min 2% max

**Processing**

Polystyrene foams made from Neopor products are produced in three stages: pre-expansion, intermediate aging and molding. Full details are given in the brochure *Processing Styropor* and in the following technical information bulletins:

- Pre-expansion of Styropor
- Intermediate aging of pre-expanded Styropor
- Steam as energy source for producing expanded foams

**Pre-expansion**

The lowest achievable apparent density depends on the type and operation of the pre-expander. The usual bead bulk-density used for molding shapes and block can be easily achieved on simple, continuous pre-expanders. The pre-expanded material has good free-flow properties and can be conveyed pneumatically without difficulty.

**Table 3**

Product	Typical expanded density range
Neopor 2200	1.25lb/ft <sup>-3</sup> (20 kg·m <sup>-3</sup> )
Neopor 2300	1.25 lbs/ft <sup>-3</sup> (20 kg·m <sup>-3</sup> )
Neopor 2400	1.40 lbs/ft <sup>-3</sup> (23 kg·m <sup>-3</sup> )

**Intermediate aging**

The minimum recommended pre-puff intermediate aging period for low density block molding of these products is 10 hrs depending on density, ambient temperature, the intended use of the bead, and the molding equipment to be used. Recommended aging is 10-24 hours.

**Molding**

Neopor can be molded on commercial molding machines. Shapes can be molded at relatively high mold temperatures in short cycles and with low steam consumption. Complex molds are also easy to fill. Molding can be accomplished under a wide range of conditions and densities.

Find additional property and use information at [www.neopor.basf.com](http://www.neopor.basf.com)

**Safety**

Neopor products and the finished foam products should not be exposed to ignition sources (including open flame, sparks, or electrostatic charges) during storage, processing, shipment and application. Adequate ventilation in all processing areas must be provided to prevent hazardous accumulations of hydrocarbon vapors.

For complete safety precautions and recommendations, refer to the Styropor bulletin S-6 *Fire Safety Precautions in Styropor Processing Plants* and appropriate Material Safety Data Sheets.

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*Values shown are based on limited testing and are not intended to be used in establishing maximum or minimum ranges for specification purposes.*

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