

Technical Leaflet | May 2014

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Neopor® F 2000

Application

Neopor® is used to manufacture silver-grey coloured foams that have considerably better thermal insulation capacity than conventional EPS products.

For the production of expanded foams having fire characteristics in conformity with:

- DIN 4102 -B1 (flame-retardant)
- EN ISO 13501-1-E

For additional information pertaining to the fire behavior please contact the local BASF representative.

Product description

Expandable polystyrene (EPS) containing uniformly distributed flame retardant. Blowing agent: pentane.

Physical form

Neopor® F 2000 is supplied in the form of spherical beads.

Storage

Neopor® should always be stored in a cool place (below 20°C if possible) to minimize loss of blowing agent. The material is normally supplied in card-board containers. It can be stored in these unopened receptacles for 1 month respectively before processing.

Containers should not be exposed to the weather (rain, snow, frost, and sunlight) and must be protected from damage.

Once containers have been opened, their contents should be used as soon as possible. Containers should always be kept tightly sealed.

Neopor® F 2200	For blocks and thick-walled shapes
Neopor® F 2300	For blocks and shapes with wall thicknesses over 8mm
Neopor® F 2400	For shapes with wall thicknesses over 6mm

	Bead size range	Sieve-cut analysis	Moisture content
Neopor® F 2200	1.4-2.5 mm	> 2.5 mm	max. 1%
		1.25-2.5 mm	min. 94%
		< 1.25 mm	max. 5%
Neopor® F 2300	0.8-1.4 mm	> 1.6 mm	max. 2%
		0.7-1.6 mm	min. 96%
		< 0.7 mm	max. 2%
Neopor® F 2400	0.5-0.8 mm	> 1.0 mm	max. 2%
		0.4-1.0 mm	min. 96%
		< 0.4 mm	max. 2%

	Usual bulk density range	Recommended intermediate aging period	Value for apparent density obtainable in a single pre-foaming operation
Neopor® F 2200	12 - 25 kg/m ³	10 - 48h	17 kg/m ³
Neopor® F 2300	16 - 25 kg/m ³	10 - 48h	17 kg/m ³
Neopor® F 2400	20 - 25 kg/m ³	10 - 48h	20 kg/m ³

Processing

In order to conform with the Fire Test Certification, different materials should not be mixed.

Neopor® is converted into foam in three stages.

Preexpansion and intermediate aging

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

Expansion

Neopor® can be expanded 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.

Further information about the properties and uses of Neopor® is given at www.neopor.de

Packaging

Transparent film should not be used for packaging Neopor® boards. Use of an opaque/white or dyed film is strongly recommended.

Safety precautions

The blowing agent (pentane) that diffuses out of Neopor® raw material and foams during storage and processing can form explosive mixtures in air. It is therefore essential to guard against possible sources of ignition (e. g., open flames, sparks from welding, electrical discharge). Smoking must be strictly forbidden.

Information on necessary safety during processing is given in the Technical Information "Fire precautions in processing". Guidelines for the prevention of fires started by electrostatic discharges must also be observed.

The contents of opened containers should be used as soon as possible. At other times the containers must kept well sealed.

It is forbidden to transport Neopor® raw material or Neopor® foam in unventilated or closed vehicles. Further information is given in the respective Technical Information bulletin.

Industrial hygiene

Small quantities of the blowing agent escape when storing or processing the material. The workplace should therefore be adequately ventilated. This is especially true when hot wires are used to cut the foam since, apart from the pentane, small amounts of residual styrene are present in the vapor produced.

The exposure limits for styrene and pentane given in the TLV list and German MAK list (maximum permitted workplace concentration) must be observed.

Foodstuffs legislation

Foams made of Neopor® shall not be used in direct contact with food.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.
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