Neopor®
Innovation in Insulation

Technical Leaflet | February 2012

® = registered trademark of BASF SE

Neopor® 2400 CT

Application

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

Neopor 2400 CT foam insulation is flame retarding and complies with DIN 4102-B1. Additional information pertaining to the fire behavior can be found in the technical information sheet titled “Fire-protection behavior of foams made of Styropor®”.

Neopor® 2400 CT	For shapes with wall thicknesses over 6 mm at densities > 20 kg/m³ with short cycle time

Product description

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

	Bead size range	Sieve-cut analysis			Moisture content
Neopor® 2400 CT	0.5 - 0.8 mm	> 1.0 mm	max.	2%	< 3.5 %
		0.4 - 1.0 mm	min.	96%	
		< 0.4 mm	max.	2%	

Physical form

Neopor 2400 CT 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 cardboard containers. Its shelf life in these containers, if unopened, is one month respectively.

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.

Our guidelines on storage and transportation should be observed.

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	Usual bulk density range	Recommended intermediate aging period	Value for apparent density obtainable in a single pre-foaming operation
Neopor® 2400 CT	20 - 25 kg/m³	10 - 48 h	20 kg/m³

Processing

In order to conform with the Fire Test Certification, materials from different Suppliers 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.

Since Neopor has similar processing characteristics to Styropor®, more about processing can be found in our brochure “Processing of Styropor” and in the following Technical Information bulletins:

- “Preexpansion of Styropor”
- “Intermediate aging of pre-expanded Styropor”
- “Steam as energy source for producing expanded foams”

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

Information regarding foodstuffs legislation is given in the following Technical Information bulletin:

- “Regulatory questions concerning food packaging”

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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