

Neopor® F 5 PRO

Application

Neopor® F 5 PRO is used for the cycletime-optimized manufacturing of silver-gray colored foams with reduced thermal conductivity and a very low water absorption.

The fire characteristics of these foams are in conformity with:

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

For additional information regarding fire behaviour, please contact your local BASF representative.

Neopor® F 5 PRO	For block- and shape molding (minimum wall thickness 30mm).
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Product description

Expandable polystyrene with infrared reflecting additive. Contains uniformly distributed polymeric flame retardant. Blowing agent (pentane) content approx. 4.5% by weight.

Product	Bead size range	Typical bead size
Neopor® F 5 PRO	0.9 - 1.4 mm	0.8 - 1.5 mm (≥95% by weight)

Physical form

Neopor® F 5 PRO is supplied in the form of a lentil-shaped granulate.

Storage

Neopor® is usually supplied in cardboard containers (octabins). It can be stored in these unopened receptacles for three months before processing.

The octabins should not be exposed to weather conditions (rain, water, snow, frost, and sunlight) and must be protected from damage. They should always be stored in a cool place (below 20 °C if possible) to minimize loss of blowing agent.

Once containers have been opened, their contents should be used as soon as possible. In the meantime the octabins should be kept tightly sealed.

It is not recommended to stack octabins more than one layer high. In case of double-stacking octabins under controlled conditions, a strong plywood board must be placed between the stacked containers.

Octabins covered with a plastic hood and/or shrink-wrapped should never be double stacked.

Product	Usual bulk density-range	Recommended intermediate aging period	Achievable bulk density by single step pre-expansion
Neopor® F 5 PRO	25 - 35 kg/m³	24 - 72 h	22 kg/m³

Processing

The raw material must not be mixed with other raw materials in order to comply with the requirements of fire test certificates.

Neopor® is processed into foam in 3 steps.

■ Preexpansion

Neopor® F 5 PRO can be preexpanded to the above-mentioned densities without any problems using discontinuous, state-of-the-art preexpanders.

■ Intermediate aging

The intermediate aging time should be selected depending on the bulk density, the ambient temperature and the intended application. It is usually between 24 and 72 hours.

■ Molding

Neopor® F 5 PRO can be molded in commercially available block- and shapemolding machines. Due to the slightly lenticular shape of the particles, adjustments to the filling systems of the shapemolding machines may be necessary.

If recycling material is to be added, it must be ensured that the density of the recycling material is as closely as possible to the preexpansion density in order to avoid separation effects in the molds. Moreover it is recommended to work up the recycling material in a dedusting system before use.

For further information regarding processing, please contact your local BASF contact person.

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

Packaging

Sheets and molded parts made of Neopor® must not be packed in transparent films. The use of an opaque/white or dyed film is strongly recommended.

Safety precautions

It should be noted, that during the processing and storage of Neopor®, as well as of foams produced from it, explosive blowing agent/air mixtures may be formed by diffusing blowing agent (pentane, LEL 1.3 vol%).

Therefore, adequate ventilation must be provided at all times. All conceivable ignition sources (open flames, welding sparks, electrical sparks etc.) must be kept away and electrostatic charging must be avoided. Smoking must be strictly prohibited!

It is forbidden to transport Neopor® raw material or Neopor® foam in unventilated or closed vehicles. Further information is given in the respective safety data sheet.

Industrial hygiene

Pentane escapes during storage and processing of Neopor®. The workplace should therefore be well ventilated. Especially when hot-wire cutting the foams, it is important to ensure that the vapours produced are extracted, as they contain small amounts of styrene in addition to pentane.

The regionally applicable workplace concentration limits for styrene and pentane 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.