Styropor®, Neopor® and Peripor® from BASF

The Product Portfolio with the Most EPS Experience

BASF's EPS experience goes back more than 65 years: as early as 1951, the Company patented Styropor®, the classic white expandable polystyrene, thereby setting the standard for many insulation and packaging applications. In 1997, BASF took a major step forward with regard to EPS: the material was enriched with particles of graphite and the insulation properties of the foam were therefore significantly improved. This became the powerful Neopor®.

BASF

We create chemistry

A Complete Product Range for All Construction and Packing Applications

For conventional EPS insulating applications, BASF's range includes the Styropor® F 15 E product types. Optimized cycle times and lower block moulding times are achieved with the Styropor® F 95 E series. Peripor® rounds out BASF's offering for the construction segment. With its short cylce times during processing and its low water absorption, the product fulfils the most demanding requirements.

In addition, BASF serves the packaging industry with its EPS product range: The products of the Styropor® P 26 series are characterised by their mechanical strength. The portfolio is supplemented by Styropor® P 24 Speed grades, which offer significantly reduced intermediate conditioning and moulding cycle times.

Product	Flame retar-dant	Block	Mould-ing	Loose filling	Insulation perfor-mance	Bead size range (mm)	Typical appli-cation density (kg/m³)	Typical applications
Styropor® F 15 E Pentane content: ~6.0%								
Styropor® F 215 E	✓	✓		✓	+	1.0 - 2.0	12 - 25	Exterior insulation (ETICS), cavity wall insulation
Styropor® F 315 E	✓	✓	✓		+	0.7 - 1.0	12 - 25	Exterior insulation (ETICS), flat roof insulation, attic insulation, ceiling insulation, steep roof insulation, insulating concrete forms (ICF)
Styropor® F 415 E	✓		✓			0.4 - 0.7	20 - 30	Decorative ceiling panels, technical mouldings
Styropor® F 95 E Pentane content: ~4.5%								
Styropor® F 295 E	✓	✓			○	1.1 - 2.0	15 - 30	Exterior insulation (ETICS), ceiling insulation, flat roof insulation
Styropor® F 395 E	✓	✓	✓		○	0.7 - 1.1	18 - 35	Ceiling insulation, attic insulation, steep roof insulation, technical mouldings, insulating concrete forms (ICF)
Styropor® F 495 E	✓		✓		○	0.4 - 0.7	22 - 35	Decorative ceiling panels, technical mouldings
Peripor® E Pentane content: ~4.5%								
Peripor® 200 E	✓	✓	✓		○	1.1 - 2.0	25 - 35	Perimeter insulation, flat roof insulation
Peripor® 300 E	✓		✓		○	0.7 - 1.1	25 - 35	Perimeter insulation, flat roof insulation
Styropor® P 24 Speed Pentane content: ~4,8%								
Styropor® P 224 Speed		✓	✓		○	1.0 - 1.3	16 - 30	Insulation without flame-retardant requirement, technical mouldings, packaging
Styropor® P 324 Speed			✓		○	0.7 - 1.0	18 - 35	Food packaging, technical mouldings, insulated containers
Styropor® P 424 Speed			✓		○	0.4 - 0.7	22 - 40	Packaging, insulated containers, seed boxes
Styropor® P 26 Pentane content: ~6.0%								
Styropor® P 226		✓	✓		○	0.9 - 1.3	15 - 20	Insulation without flame-retardant requirement, packaging
Styropor® P 326			✓		○	0.7 - 0.9	16 - 25	Packaging, insulated containers (e.g. fish boxes)
Styropor® P 426			✓		○	0.4 - 0.7	18 - 30	Packaging, insulated containers
Styropor® P 656				✓	○	0.2 - 0.4	12 - 15	Aggregate for lightweight plaster

BASF's Neopor® brand features the broadest product portfolio in the grey EPS segment and thus supplements the traditional Styropor® range. It stands out with its improved product characteristics and therefore enables more efficient insulation solutions, resulting in a better ratio between cost and insulation value.

Neopor® is produced using two technologies: polymerization and extrusion. The product range comprises the Neopor® F 2000 series and the Neopor® F 5000 series.

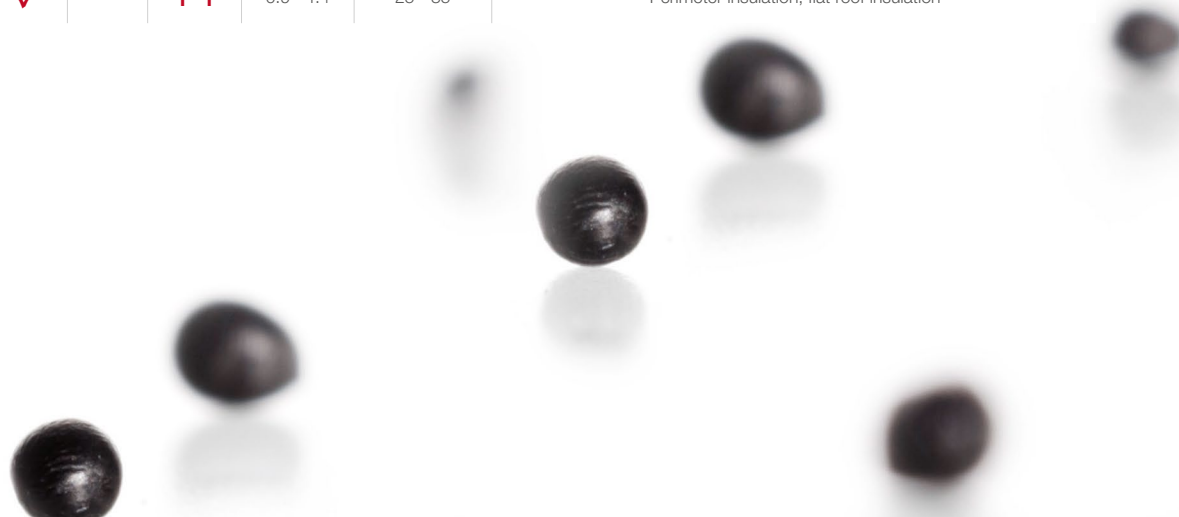
Neopor® F 2000:

- Produced by polymerization
- In the market since 1998
- Characterized by a silver-grey color and spherical particles

Neopor® F 5000:

- Produced by extrusion
- In the market since 2009
- Characterized by good processing properties
- Neopor® F 5200/5300 Plus and Neopor® P 5200 with optimized insulation performance
- Neopor® F 5 PRO with optimized cycle time and water uptake

Product	Flame retardant	Block	Moulding	Loose filling	Insulation performance	Bead size range (mm)	Typical application density (kg/m³)	Typical applications
Polymerization – Neopor® 2000 Pentane content: ~5.3%								
Neopor® F 2200	✓	✓		✓	++	1.4 - 2.5	12 - 25	Exterior insulation (ETICS), cavity wall insulation
Neopor® F 2300	✓	✓	✓	✓	++	0.8 - 1.4	16 - 25	Exterior insulation (ETICS), flat roof insulation, cavity wall insulation, attic insulation, ceiling insulation, steep roof insulation
Neopor® F 2400	✓		✓		++	0.5 - 0.8	20 - 25	Insulating concrete forms (ICF), core insulation, insulation containers
Neopor® F 4 Speed	✓	(✓)	✓		++	0.5 - 0.8	22 - 30	Flat roof insulation, insulating concrete forms (ICF)
Extrusion – Neopor® 5000								
Pentane content: ~5.3%								
Neopor® P 5200		✓		✓	+++	1.2 - 1.6	12 - 20	Interior insulation, cavity wall insulation
Neopor® F 5300	✓	✓	(✓)		++	0.9 - 1.4	15 - 25	Exterior insulation (ETICS), interior insulation, attic insulation, ceiling insulation, steep roof insulation
Neopor® F 5300 Plus	✓	✓	(✓)	✓	+++	0.9 - 1.4	13 - 20	Exterior insulation (ETICS), flat roof insulation, cavity wall insulation, attic insulation
Pentane content: ~5.5%								
Neopor® F 5200	✓	✓		✓	++	1.2 - 1.6	13 - 25	Exterior insulation (ETICS), interior insulation, attic insulation, ceiling insulation, steep roof insulation, cavity wall insulation
Neopor® F 5200 Plus	✓	✓		✓	+++	1.2 - 1.6	13 - 20	Exterior insulation (ETICS), cavity wall insulation
Pentane content: ~4.5%								
Neopor® F 5 PRO	✓	(✓)	✓		++	0.9 - 1.4	25 - 35	Perimeter insulation, flat roof insulation



Product groups	Key properties
Styropor® P 24 Speed (not flame retardant)	■ Reduced blowing agent content ■ Very short intermediate conditioning and moulding cycle times, for medium to high densities ■ Reduced VOC emissions ■ Foam suitable for direct contact with food
Styropor® P 26 (not flame retardant)	■ Particularly energy-efficient operation, short cycle times, close density distribution ■ Foam suitable for direct contact with food (except for Styropor® P 656)
Styropor® F 15 E (flame retardant)	■ Universally applicable, short cycle times, low densities, close density distribution ■ Foams with favourable thermal insulation properties ■ Foams producible in building material classification E (EN 13501-1)
Styropor® F 95 E (flame retardant)	■ Short cycle times, for medium to high densities, close density distribution ■ Reduced blowing agent content ■ Foams with favourable thermal insulation properties ■ Foams producible in building material classification E (EN 13501-1)
Peripor® E (flame retardant)	■ Short cycle times, for medium to high densities, close density distribution ■ Foams producible with particularly low water absorption in immersion test and in diffusion test ■ Reduced blowing agent content ■ Foams producible in building material classification E (EN 13501-1)
Neopor® F 2000 (flame retardant)	■ Energy-efficient operation, short cycle times, low densities, close density distribution ■ Silver-grey foams with particularly favourable thermal insulation properties ■ Foams producible in building material classification E (EN 13501-1)
Neopor® F 5000 (flame retardant)	■ Energy-efficient operation, short cycle times, low densities, close density distribution ■ Grey foams with particularly favourable thermal insulation properties ■ Foams producible in building material classification E (EN 13501-1)
Neopor® F 5 PRO (flame retardant)	■ Short cycle times, for medium to high densities, close density distribution ■ Foams producible with particularly low water absorption in immersion test and in diffusion test ■ Reduced blowing agent content ■ Grey foams with particularly favourable thermal insulation properties ■ Foams producible in building material classification E (EN 13501-1)
Neopor® P 5200 (not flame retardant)	■ Energy-efficient operation, short cycle times, low densities, close density distribution ■ Grey foams with particularly favourable thermal insulation properties

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Important Note

The information provided in this publication is based on our current knowledge. However, because of the many factors that can influence the processing and use of our product it does not free users from the obligation to carry out tests and trials of their own. No guarantee of certain properties or the suitability of the product for specific applications may be derived from our information. All descriptions, drawings, photographs, data, ratios, weights etc. contained in this publication may change without notice and do not represent contractually agreed properties of the property. Recipients of our product are responsible for observing any existing property rights as well as applicable laws and regulations. (August 2018)

Further information available at: **www.neopor.de** and **styropor.com**