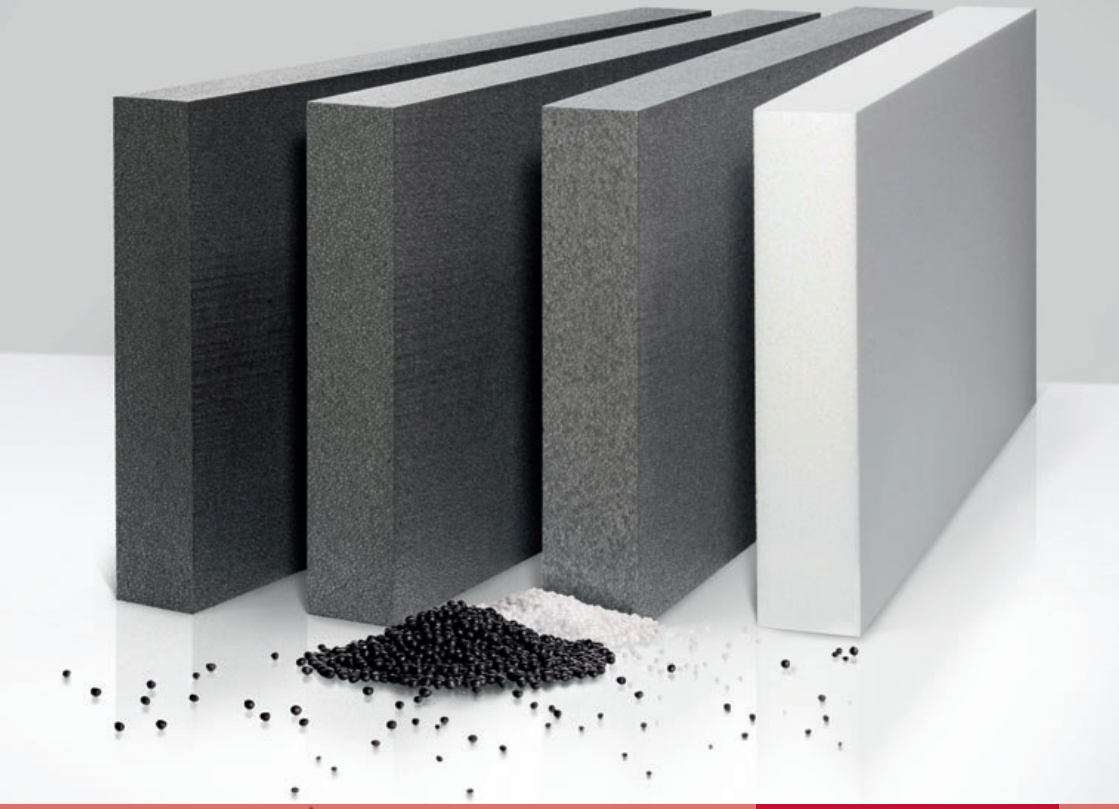
Styropor®, Neopor®, and Peripor® from BASF

The Product Portfolio with the Most EPS Experience



BASF's EPS experience goes back more than 60 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®.

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A Complete Product Range for All Construction and Packaging Applications

For conventional EPS insulating applications, BASF's range includes the Styropor® F15 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 low water absorption and extremely short cycle times, the product fulfils the most demanding requirements.

In addition, BASF serves the packaging industry with its EPS product range: thanks to their short cycle times and high mechanical resistance, products from the Styropor® P 26 series provide the ideal solution for these applications.

Basic types	Flame retardant	Block	Molding	Loose filling	Insulation performance	Particle size (mm)	Typical density range (kg/m³)	Typical applications
Styropor® F 15 E Pentane content: ~6.0%								
Styropor® F 215 E	✓	✓		✓	+	1.0 - 2.0	12 - 20	Exterior insulation (ETICS), cavity wall insulation
Styropor® F 315 E	✓	✓	✓		+	0.7 - 1.0	12 - 25	Exterior insulation (ETICS), flat roof, attic insulation, ceiling insulation, steep roof insulation, ICF
Styropor® F 415 E	✓		✓			0.4 - 0.7	15 - 25	Decorative ceiling panels, technical moldings
Styropor® F 95 E Pentane content: ~4.5%								
Styropor® F 295 E	✓	✓			○	1.0 - 2.3	15 - 30	Exterior insulation (ETICS), ceiling insulation
Styropor® F 395 E	✓	✓	✓		○	0.7 - 1.0	15 - 30	Ceiling insulation, attic insulation, steep roof insulation, technical moldings, ICF
Styropor® F 495 E	✓		✓		○	0.4 - 0.7	17 - 30	Decorative ceiling panels, technical moldings
Peripor® E Pentane content: ~4.5%								
Peripor® 200 E	✓	✓	✓		○	1.0 - 2.3	25 - 35	Perimeter insulation, flat roof insulation
Peripor® 300 E	✓		✓		○	0.7 - 1.0	25 - 35	Perimeter insulation, flat roof insulation
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	16 - 25	Packaging, insulated containers
Styropor® P 656				✓	○	0.2 - 0.4	12 - 15	Aggregate for lightweight plaster

Styropor P: not flame retardant
Styropor F/Peripor: products with polymer flame retardant (suffix E)

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

Basic types	Flame retardant	Block	Molding	Loose filling	Insulation performance	Particle size (mm)	Typical density range (kg/m³)	Typical applications
Polymerization - Neopor® 2000 series Pentane content: ~5.3%								
Neopor® F 2200	✓	✓		✓	++	1.4 - 2.5	12 - 20	Exterior insulation (ETICS), cavity wall insulation
Neopor® F 2300	✓	✓	✓	✓	++	0.8 - 1.4	12 - 20	Exterior insulation (ETICS), flat roof insulation, cavity wall insulation, attic insulation, ceiling insulation, steep roof insulation
Neopor® F 2400	✓		✓		++	0.5 - 0.8	16 - 25	Insulating concrete forms (ICF), core insulation, insulation boxes
Neopor® F 4 speed	✓	(✓)	✓		++	0.5 - 0.8	22 - 30	Flat roof insulation, insulating concrete forms (ICF)
Extrusion - Neopor® 5000 series Pentane content: ~5.3%*								
Neopor® F 5300	✓	✓	(✓)		++	0.9 - 1.4	13 - 25	Exterior insulation (ETICS), interior insulation, attic insulation, ceiling insulation, steep roof insulation
Neopor® F 5200 Plus	✓	✓		✓	+++	1.2 - 1.6	13 - 20	Exterior insulation (ETICS, hanging facade), cavity wall insulation
Neopor® F 5300 Plus	✓	✓	(✓)	✓	+++	0.9 - 1.4	13 - 20	Exterior insulation (ETICS, hanging facade), flat roof insulation, cavity wall insulation, attic insulation
Neopor® P 5200		✓		✓	+++	1.2 - 1.5	11 - 20	Interior insulation, cavity wall insulation
Neopor® F 5 PRO	✓	(✓)	✓		++	0.9 - 1.4	25 - 35	Perimeter insulation, flat roof insulation

Neopor P: not flame retardant
Neopor F: products with polymer flame retardant
Neopor F 5200 Plus pentane content: ~5,6%
Neopor F 5 PRO pentane content: ~ 4,5%

Product groups	Key properties
Styropor® P (not flame retardant)	■ Particularly energy-efficient operation, short cycle times, close density distribution ■ Foam suitable for direct contact with food
Styropor® F 15 E (flame retardant)	■ Universally applicable, short cycle times, low densities, close density distribution ■ Foams with favorable 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 favorable 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 favorable 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 favorable 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 favorable 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 favorable thermal insulation properties

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