



# F-4000

## Expandable Polystyrene (EPS) Flame Retardant\*

### Description

F-4000 is an expandable polystyrene (EPS) resin which contains pentane gas as foam blowing agent and the cycloaliphatic brominated hydrocarbon as its flame retardant agent.

This grade exhibits outstanding expansion, insulation, moisture proofing and mechanical load bearing properties.

### Applications

Rigid insulation boards, Panel applications, Low density housing and construction blocks, Civil Engineering

Flame Retardant series are suitable for self-extinguishing applications where the oxygen index is potentially high.

### Packaging

Baniar EPS are available in two packaging types:

- ⊗ 25 kg woven polypropylene laminated double-layered Kraft sacks
- ⊗ 1000 kg polypropylene bulk jumbo bags

### Storage

For Baniar EPS to keep all characteristics, we advise to store the containers indoor in a dry, cool and well-ventilated area in the ambient temperature preferably below 20 °C.

EPS should not be exposed to direct sunlight, heat, flame, rain, snow or frost.

Once the package is opened, the EPS should be used as soon as possible and not be left open for a long time.

### Cautions

Baniar EPS is not classified as a dangerous material but may produce flammable vapors. Thus:

- ⊗ Only store in well ventilated premises.
- ⊗ No fire nor sparks in the vicinity.
- ⊗ No smoking nor welding.

### Recycling

The wastes of Baniar EPS products could be re-used through mixing with virgin materials after proper grinding and cleaning.

### Processing

F-4000 can be easily pre-expanded down to 16 g/l after one expansion and down to 12 g/l after a second one.

The recommended ageing time before molding obviously depends on the pre-expanded density and ranges from 6 to 24 hours.

Molding is characterized by fast cycle times. In addition, due to an excellent reaction to steam, it is possible to mold with a higher content of recycled material without significant reductions in properties.

### F-4000 Physical and Chemical Properties

Appearance: Ivory-white pearl-like sphere

Property	Unit	Value †
Bead Size (≥ 99.0%)	mm	0.5-0.8
Blowing Agent Content	wt%	≥ 6.0
Moisture Content	wt%	≤ 0.80
Polymer Content	wt%	92-94
Coating Agent Content	wt%	< 0.30
Residual Monomer	wt%	< 0.30
Foam Density**	g/l	16-18
Specific Gravity	-	1.02-1.05
Expandability	times	50-95
Fusion (Min.)	%	60
Limiting Oxygen Index	%	> 30
CFC Content	%	0
Flammability (Max.)	sec	3

† Values are typical, and are intended as guides only, not as specifications.

\* In accordance with German DIN 4102 Part 1 - Class B2 Standard on Flame Retardants

\*\* Foam Lower densities could be achieved in multiple pre-expansions.

Note: The above information is provided in good faith. Baniar Polymer is not responsible for any processing or compounding which may occur to produce finished articles, packaging materials or their components. Responsibility for use, storage, handling and disposal of the products described herein is that of the purchaser or end user.