

# CIRCULUM®

## GFS-714o

### DESCRIPTION

**GFS-714o** is a flame retardant (FR) grey expandable polystyrene grade with reduced thermal conductivity containing graphite. Pentane is used as blowing agent and a brominated polymeric flame retardant (PFR) as flame retardant additive. The product is delivered in the form of spherical beads with a bulk density of about 0.6 g/cm<sup>3</sup> and is available in 1100 kg octabins.

### APPLICATIONS

GFS-714o is used for block and shape moulded applications. Due to its small bead size, it can also be used for producing thin wall shape moulded products with a minimum thickness between 10-30mm.

### PROCESSING

The processing conditions of GFS-714o depends on the combination of the product and processing equipment used. Optimal settings have to be adjusted for each combination. Some general processing conditions are given below:

- **Pre-expansion:**  
Circulum® GFS can be pré-expanded using common continuous and discontinuous pré-expanders. Grey EPS needs to be processed at lower steam pressure compared to white EPS. The minimum achievable density depends on the grade type, processing parameters and pré-expansion equipment.  
  
For Circulum® GFS-714o, the typical density range in a one-step pré-foaming process is 20–40 kg/m<sup>3</sup>.
- **Silo storage (ageing):**  
Silo storage time depends on density of the pré-foamed beads and ambient conditions. Typical silo time is 10–48 hours.
- **Moulding:**  
Circulum® GFS can be moulded with standard steam chest moulding machines. The steaming time and the steaming pressure will depend on the equipment used as well as on the size of the final product.
- **Cutting:**  
Hot wire cutting (oscillating or stationary wires) is recommended. Temperature of the wires should be about 200–300 °C.

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## TECHNICAL INFORMATION

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### TYPICAL PHYSICAL PROPERTIES

#### Raw material

	<u>Value</u>	<u>Unit</u>	<u>Test method</u>
Pentane content	5.0 – 6.0	%	Gas chromatography
Monomer level	< 0.1	%	Gas chromatography
Main bead size distribution	0.6 -1.0	mm	Image analyser

### STORAGE AND HANDLING

GFS-714o should be stored at below 20 °C. Protect from direct sunlight and other weather conditions (rain, wind, frost etc.). Keep away from any source of ignition. The storage time should not exceed three months. After opening of the packaging, it should be used as soon as possible.

### SAFETY

In transport GFS-714o is classified according to European regulations for product transport: Substance number UN2211, Class 9.

In processing avoid generating dust. All equipment should be properly earthen. Releases pentane during processing which might form a flammable/explosive vapour-air mixture. Use proper ventilation and keep away from any source of ignition. A Safety Data Sheet is available on request.

### RECYCLING

GFS-714o is suitable for recycling using modern methods of grinding, cleaning and regranulation. In-house production waste should be kept clean to facilitate direct recycling.

Please contact your BEWI representative for more details on various aspects of safety, recovery and disposal of the product.

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