
EXPANDABLE POLYSTYRENE

G-710

DESCRIPTION

G-710 is an expandable polystyrene grade with reduced thermal conductivity containing graphite. Pentane is used as a blowing agent. The product is delivered in the form of spherical beads with a bulk density of about 0,6 g/cm³ and is available in 1,1 ton octabins.

APPLICATIONS

The properties of **G-710** make it suitable for the production of thick-walled shape-moulded products as well as heavy insulation board by continuous machine or block process.

PROCESSING

The processing conditions of **G-710** depend 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:

Prefoaming	The steam has to be saturated at a temperature of 100 - 110 °C. To reach higher densities (> 30 kg/m ³) it is recommended to mix the steam with air.
Conditioning	Depends on the density, generally 12 - 24 hours is recommended.
Moulding	The machine should be fed with saturated steam with a max pressure of about 2 bar. Steaming time depends on the equipment used as well as the size and required strength of the final product. Therefore, all machines have to be adjusted individually. Equipment using vacuum is recommended to reduce cycle times and to increase product strength.
Cutting	Hot wire cutting - oscillating or stationary wires - is recommended. Temperature of the wires should be about 200 - 300 °C.

TECHNICAL INFORMATION

TYPICAL PHYSICAL PROPERTIES

Raw material	Value	Unit	Test method
Pentane content	5.5-6.5	%	Gas chromatography
Monomer level	< 0.1	%	Gas chromatography
Main bead size distribution	0.7 – 1.1	mm	Image analyser
End product	<u>15 kg/m³</u>	<u>20 kg/m³</u>	<u>25 kg/m³</u>
Compressive stress (10 %), (kPa), EN 826	70	110	150
Bending strength, (kPa), EN 12089	170	230	290
Heat conductivity (λ_{10}) mW/(mK), EN 12667 Heat flow meter-method	31.0	30.0	29.5

STORAGE AND HANDLING

G-710 should be stored below 20 °C. Avoid direct sunlight and keep away from any source of ignition. To ensure the best performance in prefoaming and moulding, the storage time should not exceed one month.

SAFETY

G-710 is not classified as a dangerous material. A Safety Data Sheet is available on request.

Avoid generating dust. All equipment should be properly grounded. Releases pentane during processing, which might form a flammable/explosive vapour - air mixture. Use proper ventilation.

RECYCLING

G-710 is suitable for recycling using modern methods of grinding, cleaning and regranulating. In-house production waste should be kept clean to facilitate direct recycling. Please contact your BEWI RAW representative for more details on various aspects of safety, recovery and disposal of the product.

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