

CIRCULUM®

K-1010e

DESCRIPTION

K-1010e is an expandable polystyrene grade containing pentane as a blowing agent. The products are delivered in the form of spherical beads with a bulk density of about 0.6 g/cm³. **K-1010e** is available in 1050 kg octabins.

APPLICATIONS

The properties of **K-1010e** make it suitable for the production of thin-walled shape-moulded products as well as heavy insulation board by block moulding.

PROCESSING

The processing conditions of **K-1010e** 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. The higher the density the longer the conditioning time. Generally 12–24 hours is recommended.
Moulding	<p>The machine should be fed with saturated steam with a maximum pressure of about 2 bar.</p> <p>The 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.</p>
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	5.3 – 6.3	%	Gas chromatography
Monomer level	< 0.1	%	Gas chromatography
Main bead size distribution	0.35 – 0.6	mm	Image analyser

End product	20 kg/m ³	30 kg/m ³	40 kg/m ³
Compressive stress (10 %), (kPa), EN 826	115	200	280
Bending strength, (kPa), EN 12089	240	380	560
Heat conductivity (λ_{10}), (W/mK), EN 12667	0.034	0.032	0.032

FOOD CONTACT REGULATIONS

K-1010e meets the food contact regulations in most countries. If required, contact your BEWI representative for a certificate.

STORAGE

K-1010e 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 **K-1010e** 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

K-1010e 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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