CIRCULUM®

BIOFOAM

DESCRIPTION

BioFoam is an expanded poly lactic acid foamed bead
The products are delivered in the form of spherical beads with a bulk density between 16-35 g/L. **BioFoam** is available in 1.8m3 big bags.

APPLICATIONS

The properties of **BioFoam** make it suitable for filling hollow spaces, beanbags, pillows and for the production of light and heavy products by shape moulding.

PROCESSING

The processing conditions of **BioFoam** 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

Before prefoaming the beads need to be impregnated with CO_2 in a pressure vessel. The impregnated beads can be foamed with hot air or a mixture of steam with air.

Coating

For the foamed beads to continue to the molding step a coating must be applied to improve the fusion between the beads.

Moulding

Prior to molding the foamed beads need to be impregnated with air or pressure filling must be applied because no blowing agent is inside the beads.

The machine should be fed with saturated steam with a maximum pressure of about 2 bar.

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.

Cutting

Hot wire cutting (oscillating or stationary wires) is recommended. Temperature of the wires should be about 200–300 °C.

TECHNICAL DATA SHEET
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TECHNICAL INFORMATION

TYPICAL PHYSICAL PROPERTIES

Raw material

	Value	Unit	Test method
Monomer level	< 0.1	%	Gas chromatography
Main bead size distribution	0.8 – 1.6	mm	Image analyser

End product

	35 kg/m^3
Compressive stress (10 %), (kPa), EN 826	160
Bending strength, (kPa), EN 12089	250
Heat conductivity (λ_{10}), (W/mK), EN 12667	0.035

STORAGE

BioFoam should be stored at below 30 °C. Protect from direct sunlight and other weather conditions (rain, wind, frost etc.). The storage time should not exceed one year.

SAFETY

In transport **BioFoam** is classified according to European regulations for product transport: non hazardous.

RECYCLING

BioFoam 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 RAW representative for more details on various aspects of safety, recovery and disposal of the product.