Product Information | February 2019

Polystyrol 158 K

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Product description

Polystyrol 158 K is a heat resistant, rapid freezing general purpose grade. It is suitable for expanded sheet and film for blends with high impact Polystyrol in heat contact applications, for transparent, resistant applications in blends with styrene-butadiene block copolymer resins (SBC).

Processing

Polystyrol 158 K can be injection moulded at temperatures between 180 and 260 °C. Recommended mould temperatures are between 10 and 60 °C. Extrusion melt temperature should not exceed 240 °C.

Applications

In blends with high impact polystyrene or SBC: thermoformed articles for packaging of dairy products, cups for hot beverages, e.g. coffee cups with low heat shrinkage. As material for physically or chemically foamed sheet, e.g. for meat trays or labels. Injection moulded articles.

Physical form and Storage

Polystyrol 158 K should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight.
Polystyrol 158 K can be stored in silos.

Product safety

During processing of Polystyrol 158 K small quantities of styrene monomer may be released into the atmosphere. At styrene vapour concen-trations below 20 ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well ventilated workplaces – that is where five to eight air changes per hour are made. Further information can be found in our Polystyrol safety data sheets.

Food legislation

For additional information pertaining the food legislation please contact the local BASF representative.

Note

The data contained in this publication are based on our knowledge and experience. In any case and in view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

In order to check the availability of products please contact us or our sales agency.

Typical values at 23 °C[1)]	Test method	Unit	Values
Mechanical Properties			
Tensile modulus	ISO 527-1/2	MPa	3300
Stress at break	ISO 527-1/-2	MPa	55
Strain at break	ISO 527-1/-2	%	3
Flexural strength	ISO 178	MPa	103
Shear modulus	ISO 6721-2	MPa	1400
Charpy impact strength (23 °C)	ISO 179/1eU	kJ/m²	15
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m²	3
Ball indentation hardness at 358 N/30 s	ISO 2039-1	MPa	160
Thermal properties			
Vicat softening temperature VST/B/50	ISO 306	[°C]	100
Vicat softening temperature VST/A/120	ISO 306	[°C]	107
HDT A (1.80 MPa)	ISO 75-1/-2	°C	86
HDT B (0.45 MPa)	ISO 75-1/-2	°C	98
Processing			
Melt volume-flow rate MVR 200 °C/5 kg	ISO 1133	[cm³/10 min]	3.5
Electrical properties			
Dielectric constant (100 Hz)	IEC 60250	-	2.5
Dielectric constant (1 MHz)	IEC 60250	-	2.5
Volume resistivity	IEC 6093	Ohm * m	>1E+14
Surface resistivity	IEC 6093	Ohm	>1E+14
Dielectric strength K20/P50	IEC 60243-1	kV/mm	135
Flammability			
UL 94 (d = 1.6 mm)	UL-94	class	94HB
UL 94 (d = 3.18 mm)	UL-94	class	94HB
Other properties			
Density	ISO 1183	g/cm³	1.050
Water absorption, equilibrium in water at 23 °C	similar to ISO 62	%	<0.1
Moisture absorption, equilibrium 23 °C/50 % r.h.	similar to ISO 62	%	<0.1

Footnotes
[1)] If product name or properties don't state otherwise.