Product Information

04/2005

Polystyrol 168 N

PS

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Product description

Polystyrol 168 N is a high molecular, heat resistant grade used where high strength is required. Suitable for physically or chemically expanded extruded sheet. As blend component with high impact Polystyrol or Styrolux.

Processing

Polystyrol 168 N can be injection molded at temperatures between 180 and 280°C.Recommended mold temperatures are between 10 and 60°C.
Extrusion melt temperature should not exceed 240°C.

Applications

Foamed meat trays, foamed labels. In mixture with high impact Polystyrene for coffee cups, lids. In mixture with Styrolux for transparent, impact resistant cups, beakers and lids.

Physical form and Storage

Polystyrol 168 N should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. Polystyrol 168 N can be stored in silos.

Food legislation

If used unmodified and under appropriate processing conditions parts from Polystyrol 168 N comply with the usual requirements for food packaging. Detailed written confirmations (e.g. BGVO, FDA) are given on request. Please contact our regional sales office.

Product safety

During processing of Polystyrol 168 N small quantities of styrene monomer may be released into the atmosphere. At styrene vapour concentrations 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.

Note

The data contained in this publication are based on our current knowledge and experience. 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.

BASF Aktiengesellschaft
67056 Ludwigshafen, Germany

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Typical values [1] at 23°C	Test method [2]	Unit	Values
Mechanical Properties			
Tensile modulus	ISO 527-1/-2	MPa	**3300**
Stress at break	ISO 527-1/-2	MPa	**59**
Strain at break	ISO 527-1/-2	%	**3**
Flexural strength	ISO 178	MPa	**106**
Shear modulus	ISO 6721-2	MPa	**1450**
Charpy impact strength (23°C)	ISO 179/1eU	kJ/m²	**<25**
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m²	**4**
Ball indentation hardness	ISO 2039-1	MPa	**150**
Force	ISO 2039-1	N	**358**
Duration	ISO 2039-1	s	**30**
Thermal properties			
Vicat softening temperature VST/B/50	ISO 306	°C	**101**
Vicat softening temperature VST/A/120	ISO 306	°C	**108**
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 200/5	ISO 1133	cm³/10min	**1.5**
Processing: Injection moulding (M), Extrusion (E), Blow moulding (B)	-	-	**M.E**
Melt temperature, injection moulding	-	°C	**180 - 280**
Mold temperature, injection molding	-	°C	**10 - 60**
Melt temperature, flat film	-	°C	**210 - 240**
Electrical properties			
Relative permittivity (100Hz)	IEC 60250	-	**2.5**
Relative permittivity (1 MHz)	IEC 60250	-	**2.5**
Volume resistivity	IEC 60093	Ohm*m	**>1E16**
Surface resistivity	IEC 60093	Ohm	**>1E14**
Electric strength K20/P50	IEC 60243-1	kV/mm	**135**
Flammabillity			
UL 94 (d = 1,6 mm)	UL 94	class	**HB**
UL 94 (d = 3,2 mm)	UL 94	class	**HB**
Other properties			
Density	ISO 1183	kg/m³	**1048**
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 the product definition doesn't state otherwise.
2) Specimens according to CAMPUS.

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