Product Information **Polystyrol**

495 F

01/2009 **PS-I**

BASF
The Chemical Company

Product description

Polystyrol 495 F is a high flow, high impact polystyrene with a good heat resistance and a high stiffness.

Processing

Polystyrol 495 F can be injection moulded under different conditions depending on machinery available and articles moulded. Mass temperature can be as high as 260°C. Polystyrol 495 F is suitable for gas assisted injection moulding.

Applications

Consumer electronics: TV-front and back; chassis für VCR and CD player. Household: internal parts of vacuum cleaners; refrigerator parts; drawers; audio- and video cassettes; printer housings, keyboards, computers, copier parts.

Physical form and Storage

Polystyrol 495 F is supplied as cylindrical shaped granules. It has to be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. Polystyrol 495 F can also be stored in silos.

Food legislation

If used unmodified and under appropriate processing conditions parts from Polystyrol 495 F 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 495 F 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.
Further information can be found in our Polystyrol safety data sheets. These can be downloaded from the Plastics Portal, www.plasticsportal.net.

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.

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Typical values for uncoloured product at 23 °C[1)]	Test method [2)]	Unit	Values[3)]
Mechanical properties			
Tensile modulus (Modulus of elasticity (ASTM))	ISO 527-1/-2 (ASTM D 638)	MPa	**2000 (2000)**
Yield stress, 50 mm/min (Tensile stress at yield, 2 in/min (ASTM))	ISO 527-1/-2 (ASTM D 638)	MPa	**26 (27)**
Yield strain, 50 mm/min	ISO 527-1/-2	%	**1.5**
Nominal strain at break, 50 mm/min (Percent elongation at break, 2 in/min (ASTM))	ISO 527-1/-2 (ASTM D 638)	%	**40 (40)**
Flexural modulus (Flexural modulus (ASTM))	ISO 178 (ASTM D 790)	MPa	**2100 (2000)**
Flexural strength (Flexural strength (ASTM))	ISO 178 (ASTM D 790)	MPa	**40 (35)**
Charpy impact strength (23°C)	ISO 179/1eU	kJ/m²	**N**
Charpy impact strength (-30°C)	ISO 179/1eU	kJ/m²	**130**
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m²	**17**
Izod notched impact strength (23°C)	ASTM D 256	J/m	**180**
Ball indentation hardness at $1u/$2u	ISO 2039-1	MPa	**74**
Force	ISO 2039-1	N	**358**
Duration	ISO 2039-1	s	**30**
Thermal properties			
Vicat softening temperature VST/B/50	ISO 306	°C	**88.5**
Vicat softening temperature VST/A/50	ISO 306	°C	**98**
HDT A (1.80 MPa)	ISO 75-1/-2	°C	**85**
HDT B (0.45 MPa)	ISO 75-1/-2	°C	**89**
Processing			
Melt volume-flow rate MVR 200 °C/5 kg	ISO 1133	cm³/10min	**9.5**
Processing: Injection moulding (M), Extrusion (E), Blow moulding (B)	-	-	**M**
Melt temperature, injection molding	-	°C	**180 - 260**
Mold temperature, injection molding	-	°C	**10 - 60**
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	**>1E13**
Electric strength K20/P50	IEC 60243-1	kV/mm	**155**
Optical properties			
Surface gloss	-	Skalenteile	**45**
Flammability			
UL 94 (d = 1,6 mm)	UL-94	class	**HB**
UL 94 (d = 3 mm)	UL-94	class	**HB**
IEC 65 (d = 2,4 mm)	FMVSS 302	-	**+**
Other properties			
Density	ISO 1183	kg/m³	**1028**
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.
2) Specimens according to CAMPUS.
3) The asterisk symbol '*' signifies inapplicable properties.

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