

Medium impact polystyrene combining easy flow and high stiffness
Designation: Thermoplastics ISO 2897-PS-1,M,083-12-04-30

Applications

Typical uses are toys, stationery, small containers for packaging, refrigerator components, point of sales, household articles, disposable razors, technical items.

Typical processing data

Injection moulding:

predrying normally not required

- melt temperature 200-250°C
- mould temperature 20-60°C

General information

R 321P is certified UL94 HB "all colors" at 15mm (UL file E 83071).

This product in the natural version complies by composition with the requirements of the main Regulations for plastic materials intended to come into contact with food, including Regulation (EU) No 10/2011 and following amendments.

Property	Test Conditions	Test method	Units	Values
General				
Water absorption	24h - 23°C	ISO 62	%	<0,1
Density	-	ISO 1183	g/cm ³	1,04
Bulk density	-	ISO 60	g/cm ³	0,65
Rheological				
Melt flow rate	200°C - 5kg	ISO 1133	g/10'	15
Mechanical				
Tensile strain at break	50 mm/min	ISO 527	%	40
Tensile stress at break	50 mm/min	ISO 527	MPa	19
Tensile stress at yield	50 mm/min	ISO 527	MPa	24
Flexural strength	2 mm/min	ISO 178	MPa	45
Rockwell hardness	L/M	ISO 2039/2	-	L83
Tensile modulus	1 mm/min	ISO 527	MPa	2400
Izod impact strength, notched	-30°C - 4mm	ISO 180/1A	kJm ²	3,5
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJm ²	5
Izod impact strength, notched	+23°C - 3,2mm	ISO 180/4A	Jm	68
Thermal				
Coefficient of linear thermal expansion	-	ASTM D 696	10 ⁻⁵ /°C	9
Thermal conductivity	-	ISO 8302	W/(K·m)	0,17
Moulding shrinkage	-	ISO 294/4	%	0,4 - 0,7
Deflection temperature under load (annealed)	1,82 MPa - 120°C/h	ASTM D 648	°C	80
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	85
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	94
Flammability				
Flame behaviour	1,5 mm	UL 94	cl.	HB
Glow wire test (GWT)	1,6 mm	IEC 60695-2-1	°C	650
Electrical				
Dielectric constant (relative permittivity)	50 Hz	IEC 60250	-	2,5
Dissipation factor	50 Hz	IEC 60250	-	0,0003
Comparative tracking index (CTI)	Sol. A	IEC 60112	-	375
Surface resistivity	-	IEC 60093	10 ¹⁵ ohm	>1,5
Volume resistivity	-	IEC 60093	10 ¹⁵ ohm·cm	>7
Dielectric strength	-	IEC 60243	kV/mm	65

Please consult the relevant safety data sheet for more detailed information.

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