

High impact polystyrene combining high toughness and stiffness with good flowability for easy processing.

Designed for injection moulding of technical parts, housings and covers.

Especially recommended for gas assisted technology.

RT 441M is certified BSI 415/94 acc. IEC65-20-2 at 2.5 mm.

Designation: Thermoplastics ISO 2897-PS-I,M,088-06-07-18

Applications

Business machine covers, electrical appliances, fan housings, consumer electronics, front frames, cabinet and back cover for TV sets.

Typical processing data

Injection moulding:

predrying normally not required

- melt temperature 210-260°C
- mould temperature 20-60°C

General information

RT 441M is certified UL94 HB "all colors" at 1.5 mm (UL file E83071).

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'	7,5
Mechanical				
Tensile strain at break	50 mm/min	ISO 527	%	60
Tensile stress at break	50 mm/min	ISO 527	MPa	24
Tensile stress at yield	50 mm/min	ISO 527	MPa	22
Flexural strength	2 mm/min	ISO 178	MPa	45
Rockwell hardness	L/M	ISO 2039/2	-	L75
Tensile modulus	1 mm/min	ISO 527	MPa	2000
Izod impact strength, notched	-30°C - 4mm	ISO 180/1A	kJ/m ²	6
Izod impact strength, notched	+23°C - 4mm	ISO 180/1A	kJ/m ²	8
Izod impact strength, notched	+23°C - 3,2mm	ISO 180/4A	J/m	110
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	84
Vicat softening temperature	50 N - 50°C/h	ISO 306/B	°C	89
Vicat softening temperature	10 N - 50°C/h	ISO 306/A	°C	97
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	-	500
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

