

Styrolution PS 147F

General Purpose Polystyrene (GPPS)

TECHNICAL DATASHEET

DESCRIPTION

Styrolution PS 147F is a highly transparent GPPS grade. It gives excellent mechanical and heat resistance properties while providing with easy processability and short cycle time.

FEATURES

- Medium Flow
- Easy processability
- Good mechanical and heat resistance properties

APPLICATIONS

- Transparent parts for refrigerators such as fruit and vegetable crispers, chillers, flaps, trays etc
- Stationery products like pen barrels, scales etc.
- Household applications such as crystalware, kitchen containers etc.
- Packaging applications such as chocolate boxes, display cabinets, etc.
- Other transparent articles in injection Molding applications

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	6.5
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	3
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m ²	17
Tensile Stress at Yield, 23 °C	ISO 527	MPa	50
Tensile Strain at Break, 23 °C	ISO 527	%	3
Tensile Modulus	ISO 527	MPa	3300
Flexural Strength, 23 °C	ISO 178	MPa	98
Flexural Modulus, 23 °C	ISO 178	MPa	2280
Hardness, Ball Indentation	ISO 2039-1	MPa	150
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	95
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	100
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	85

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Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	93
Electrical Properties			
Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	135
Relative Permittivity (100 Hz)	IEC 62631-2-1	-	2.5
Relative Permittivity (1 MHz)	IEC 62631-2-1	-	2.5
Volume Resistivity	IEC 62631-3-1	Ohm*m	>10 ¹⁶
Surface Resistivity	IEC 62631-3-1	Ohm	>10 ¹⁴
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.57
Light Transmission at 550 nm	ASTM D 1003	%	90
Haze	ASTM D 1003	%	2
Other Properties			
Density	ISO 1183	kg/m ³	1046
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.3 - 0.6
Melt Temperature Range	ISO 294	°C	180 - 260
Mold Temperature Range	ISO 294	°C	10 - 60
Injection Velocity	ISO 294	mm/s	200