

Styrolution PS 495F

High Impact Polystyrene (HIPS)

TECHNICAL DATASHEET

DESCRIPTION

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

FEATURES

- High flow HIPS
- Good heat resistance with high stiffness
- Suitable for gas-assisted injection molding process

APPLICATIONS

- Consumer electronics: LCD Back cover, TV-front and back cover, printer cabinets etc.
- Household: internal parts of vacuum cleaners; refrigerator parts etc.
- Large housing parts as well as filigree, shapely designs parts

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	9.5
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m ²	13
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	17
Charpy Unnotched, -30 °C	ISO 179/1eU	kJ/m ²	130
Tensile Stress at Yield, 23 °C	ISO 527	MPa	26
Tensile Strain at Yield, 23 °C	ISO 527	%	1.5
Tensile Strain at Break, 23 °C	ISO 527	%	40
Tensile Modulus	ISO 527	MPa	2000
Elongation at Break (MD)	ISO 527	%	40
Flexural Strength, 23 °C	ISO 178	MPa	40
Flexural Modulus, 23 °C	ISO 178	MPa	2100
Hardness, Ball Indentation	ISO 2039-1	MPa	74
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	90
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	98

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Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	85
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	89
Coefficient of Linear Thermal Expansion	ISO 11359	10 ⁻⁶ /°C	100
Thermal Conductivity	ISO 22007-4	W/(m K)	0.17
Electrical Properties			
Dielectric Constant (100 Hz)	IEC 62631-2-1	-	2.5
Dissipation Factor (100 Hz)	IEC 62631-2-1	10 ⁻⁴	4
Dissipation Factor (1 MHz)	IEC 62631-2-1	10 ⁻⁴	4
Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	155
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 ¹³
Optical Properties			
Specular Gloss, 60 °	-		45
Other Properties			
Density	ISO 1183	kg/m ³	1050
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