

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	kJ/m ²	17
Charpy Unnotched, 23° C	ISO 179	kJ/m ²	N
Charpy Unnotched, -30° C	ISO 179	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	ISO 178	MPa	40
Flexural Modulus	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

Styrolution PS 495F

High Impact Polystyrene (HIPS)

TECHNICAL DATASHEET

Property, Test Condition	Standard	Unit	Values
Vicat Softening Temperature, VST/A/50 (10N, 50°C/h)	ISO 306	°C	98
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	DIN 52612-1	W/(m K)	0.17
Electrical Properties			
Dielectric Constant (100 Hz)	IEC 60250	-	2.5
Dissipation Factor (100 Hz)	IEC 60250	10 ⁻⁴	4
Dissipation Factor (1 MHz)	IEC 60250	10 ⁻⁴	4
Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	155
Relative Permittivity (100 Hz)	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
Optical Properties			
Specular Gloss, 60°	ASTM D 523	%	45
Other Properties			
Density	ISO 1183	kg/m ³	1050
Water Absorption, Saturated at 23°C	ISO 62	%	<0.1
Moisture Absorption, Equilibrium 23°C/50% RH	ISO 62	%	<0.1
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

Typical values for uncolored products

SUPPLY FORM

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

PROCESSING

Styrolution PS 495 F can be injection molded under different conditions depending on machinery available and articles molded. Mass temperature can be as high as 260°C. Styrolution PS 495 F is suitable for gas assisted injection molding.

PRODUCT SAFETY

During processing of Styrolution PS resins small quantities of styrene monomer may be released into the atmosphere. At styrene vapor 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 Styrolution PS safety data sheets.

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