INEOS STYROLUTION

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	cm³/10 min	6.5
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179	kJ/m²	3
Charpy Unnotched, 23° C	ISO 179	kJ/m²	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	ISO 178	MPa	98
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, B/1 (120°C/h, 10N)	ASTM D 1525	°C	-
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 60250	-	2.5
Relative Permittivity (1 MHz)	IEC 60250	-	2.5
Volume Resistivity	IEC 60093	Ohm*m	>1E16
Surface Resistivity	IEC 60093	Ohm	>1E14
Other Properties			
Density	ISO 1183	kg/m³	1046
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 147F should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. Styrolution PS 147F can be stored in silos.

PROCESSING

Styrolution PS 147F can be injection molded at temperatures between 180 and 280°C. Recommended mold temperatures are between 10 and 60°C. Extrusion melt temperature should not exceed 260°C.

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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.

DISCLAIMER

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