

Styrolution PS 145D

General Purpose Polystyrene (GPPS)

TECHNICAL DATASHEET

DESCRIPTION

Styrolution PS 145D is a medium strength, easy flowing general purpose grade, suitable for blending with impact modified polystyrene. Styrolution PS 145D offers exceptional processing characteristics for thin walled parts, multi-cavity tools, and complex designs.

FEATURES

- Easy flowing
- Medium strength

APPLICATIONS

- Artificial jewelry, household articles such as jars and cutlery
- In high speed high productivity molding applications such as thin walled containers, multicavity small moldings, stationery products like scales etc.
- Used as a coextruded gloss cap over HIPS
- Blends with high impact polystyrene
- Suitable for FFS-sheet

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	15
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179	kJ/m ²	3
Charpy Unnotched, 23 °C	ISO 179	kJ/m ²	<25
Tensile Stress at Yield, 23 °C	ISO 527	MPa	44
Tensile Strain at Break, 23 °C	ISO 527	%	2
Tensile Modulus	ISO 527	MPa	3300
Flexural Strength, 23 °C	ISO 178	MPa	70
Hardness, Ball Indentation	ISO 2039-1	MPa	150
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	88
Vicat Softening Temperature, B/1 (120 °C/h, 10N)	ASTM D 1525	°C	96
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	80
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	88
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17

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Electrical Properties			
Dielectric Constant (100 Hz)	IEC 60250	-	2.5
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/m ³	1046
Bulk Density (with external lubricant)		kg/m ³	600
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 - 280
Mold Temperature Range	ISO 294	°C	10 - 60
Injection Velocity	ISO 294	mm/s	200