

Styrolution PS 145D

General Purpose Polystyrene
INEOS Styrolution Group GmbH

Message:

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.

General Information	
Features	General Purpose
	Good Flow
	Good Processability
	Medium Strength
Uses	Blending
	Household Goods
	Sheet
	Thin-walled Containers
	Thin-walled Parts
Forms	Pellets
Processing Method	Coextrusion
	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm ³	ISO 1183
Apparent Density ¹	0.60	g/cm ³	
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	15.0	cm ³ /10min	ISO 1133
Molding Shrinkage	0.30 to 0.60	%	ISO 294-4
Water Absorption			ISO 62
Saturation, 23°C	< 0.10	%	
Equilibrium, 23°C, 50% RH	< 0.10	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	150	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3300	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	44.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.0	%	ISO 527-2
Flexural Stress	70.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength (23°C)	3.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	< 25	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Annealed	88.0	°C	ISO 75-2/B
1.8 MPa, Annealed	80.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	96.0	°C	ASTM D1525 ²
--	88.0	°C	ISO 306/B50
Thermal Conductivity	0.17	W/m/K	DIN 52612
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Volume Resistivity	> 1.0E+18	ohms·cm	IEC 60093
Electric Strength ³ (1.50 mm)	140	kV/mm	IEC 60243-1
Dielectric Constant			
100 Hz	2.50		IEC 60250
1 MHz	2.50		IEC 60250
Injection	Nominal Value	Unit	
Processing (Melt) Temp	180 to 280	°C	
Mold Temperature	10.0 to 60.0	°C	
Injection Velocity	200	mm/sec	
NOTE			
1.	With external lubricant		
2.	Rate B (120°C/h), Loading 1 (10 N)		
3.	Short Time		

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