

Styrolution PS 542N

High Impact Polystyrene
INEOS Styrolution Group GmbH

Message:

Styrolution PS 542N is an impact polystyrene with high heat resistance.

General Information			
Features	High Heat Resistance		
	High Impact Resistance		
Forms	Granules		
Processing Method	Extrusion		
	Sheet Extrusion		
	Thermoforming		

Physical	Nominal Value	Unit	Test Method
Density	1.04	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	4.10	cm ³ /10min	ISO 1133
Molding Shrinkage	0.50 to 0.70	%	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	120	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1750	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	25.0	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	1.8	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	45	%	ISO 527-2
Flexural Stress	40.0	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	8.0	kJ/m ²	ISO 179

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Annealed)	85.0	°C	ISO 75-2/A
Vicat Softening Temperature	92.0	°C	ASTM D1525 ¹
CLTE - Flow	8.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.16	W/m/K	DIN 52612

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+13	ohms	IEC 60093

Volume Resistivity	> 1.0E+18	ohms·cm	IEC 60093
Extrusion	Nominal Value	Unit	
Melt Temperature	180 to 260	°C	
NOTE			
1.	Rate B (120°C/h), Loading 2 (50 N)		

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