

Styrolution PS 542N

High Impact Polystyrene (HIPS)

**TECHNICAL
DATASHEET**

DESCRIPTION

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

FEATURES

- High heat resistance

APPLICATIONS

- Disposables

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	4.1
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	8
Tensile Stress at Yield, 23 °C	ISO 527	MPa	25
Tensile Strain at Yield, 23 °C	ISO 527	%	1.8
Tensile Modulus	ISO 527	MPa	1750
Nominal Strain at Break, 23 °C	ISO 527	%	45
Flexural Strength, 23 °C	ISO 178	MPa	40
Flexural Modulus, 23 °C	ISO 178	MPa	3400
Hardness, Ball Indentation	ISO 2039-1	MPa	120
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	92
Vicat Softening Temperature, B/1 (120 °C/h, 10N)	ASTM D 1525	°C	105
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	85
Coefficient of Linear Thermal Expansion	ISO 11359	10 ⁻⁶ /°C	80
Thermal Conductivity	DIN 52612-1	W/(m K)	0.16
Electrical Properties			
Volume Resistivity	IEC 62631-3-1	Ohm*m	>10 ¹⁶
Surface Resistivity	IEC 62631-3-1	Ohm	>10 ¹³

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Property, Test Condition	Standard	Unit	Values
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.57
Light Transmission at 550 nm	ASTM D 1003	%	91.3
Haze	ASTM D 1003	%	0.3
Other Properties			
Density	ISO 1183	kg/m ³	1040
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.5 - 0.7
Melt Temperature Range	ISO 294	°C	180 - 260