

Styrolution PS 454N

High Impact Polystyrene (HIPS)

**TECHNICAL
DATASHEET**

DESCRIPTION

Styrolution PS 454N is an impact resistant polystyrene with a good balance of toughness, high flow, heat resistance and high gloss.

FEATURES

- Good balance of toughness, high flow, and heat resistance
- High gloss
- UL 94 HB

APPLICATIONS

- Injection molding parts
- Air conditioners
- Refrigerators
- Water tanks for toilet flushing

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	14
Mechanical Properties			
Charpy Notched Impact Strength, 23 °C	ISO 179/1eA	kJ/m ²	8
Tensile Stress at Yield, 23 °C	ISO 527	MPa	27
Tensile Strain at Yield, 23 °C	ISO 527	%	1.4
Tensile Modulus	ISO 527	MPa	2200
Elongation at Break (MD)	ISO 527	%	25
Flexural Strength, 23 °C	ISO 178	MPa	41
Flexural Modulus, 23 °C	ISO 178	MPa	2300
Hardness, Ball Indentation	ISO 2039-1	MPa	90
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	82
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	78
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	82
Coefficient of Linear Thermal Expansion	ISO 11359	10 ⁻⁶ /°C	80
Thermal Conductivity	ISO 22007-4	W/(m K)	0.17

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Property, Test Condition	Standard	Unit	Values
Other Properties			
Density	ISO 1183	kg/m ³	1040
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Melt Temperature Range	ISO 294	°C	180 - 260
Mold Temperature Range	ISO 294	°C	40
Injection Velocity	ISO 294	mm/s	200