

Styrolution PS 476L

High Impact Polystyrene (HIPS)

**TECHNICAL
DATASHEET**

DESCRIPTION

Styrolution PS 476L is a normal flow and very high impact Polystyrene. It gives good mechanical and heat resistance properties while providing with easy processability and short cycle time.

FEATURES

- Normal flow HIPS
- Good mechanical and heat resistance properties
- Easy processability with short cycle time

APPLICATIONS

- Wide range of injection molding applications , e.g. - office, kitchen and bathroom articles;
- Food packaging as beverage cups, packaging for dairy products, sheets and disposables
- Internal parts and housings of household appliances and consumer electronics
- Toys

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	5.5
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m ²	11
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	15
Charpy Unnotched, -30 °C	ISO 179/1eU	kJ/m ²	130
Tensile Stress at Yield, 23 °C	ISO 527	MPa	27
Tensile Strain at Yield, 23 °C	ISO 527	%	1.5
Tensile Strain at Break, 23 °C	ISO 527	%	30
Tensile Modulus	ISO 527	MPa	1850
Flexural Strength, 23 °C	ISO 178	MPa	40
Flexural Modulus, 23 °C	ISO 178	MPa	1950
Hardness, Ball Indentation	ISO 2039-1	MPa	85
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	90
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	98

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Property, Test Condition	Standard	Unit	Values
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	89
Coefficient of Linear Thermal Expansion	ISO 11359	10 ⁻⁶ /°C	100
Electrical Properties			
Dielectric Constant (100 Hz)	IEC 62631-2-1	-	2.5
Dissipation Factor (1 MHz)	IEC 62631-2-1	10 ⁻⁴	4
Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	155
Relative Permittivity (100 Hz)	IEC 62631-2-1	-	2.5
Relative Permittivity (1 MHz)	IEC 62631-2-1	-	2.5
Volume Resistivity	IEC 62631-3-1	Ohm*m	>10 ¹⁶
Surface Resistivity	IEC 62631-3-1	Ohm	>10 ¹³
Optical Properties			
Specular Gloss, 60 °	-		35
Other Properties			
Density	ISO 1183	kg/m ³	1050
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	10 - 60
Injection Velocity	ISO 294	mm/s	200