INEOS STYROLUTION

Styrolution PS 165N/L

General Purpose Polystyrene (GPPS)

TECHNICAL DATASHEET

DESCRIPTION

Styrolution PS 165N/L is a high molecular weight, good flowing grade, often blended with high impact extrusion grades.

FEATURES

- High molecular weight
- Good flow characteristics
- Appropriate for blending with HIPS
- UL 94 HB (Antwerp only)

APPLICATIONS

- Transparent parts for refrigerators
- Blending with HIPS for thermoformed cups

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	3.4
Mechanical Properties			
Tensile Stress at Yield, 23 °C	ISO 527	MPa	52
Tensile Strain at Break, 23 °C	ISO 527	%	2
Tensile Modulus	ISO 527	MPa	3300
Tensile Creep Modulus (1000h)	ISO 899	MPa	2600
Tensile Creep Modulus (1h)	ISO 899	MPa	3300
Flexural Strength, 23 °C	ISO 178	MPa	86
Flexural Modulus, 23 °C	ISO 178	MPa	1650
Hardness, Rockwell	ISO 2039-2	R scale	62
Hardness, Ball Indentation	ISO 2039-1	MPa	150
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	89
Vicat Softening Temperature, B/1 (120 °C/h, 10N)	ASTM D 1525	°C	97
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	76
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	84
Coefficient of Linear Thermal Expansion	ISO 11359	10^{-6}/°C	80

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Property, Test Condition	Standard	Unit	Values
Thermal Conductivity	ISO 22007-4	W/(m K)	0.17
Electrical Properties			
Dielectric Constant (100 Hz)	IEC 62631-2-1	-	2.5
Dissipation Factor (100 Hz)	IEC 62631-2-1	10^{-4}	0.9
Dissipation Factor (1 MHz)	IEC 62631-2-1	10^{-4}	0.7
Volume Resistivity	IEC 62631-3-1	Ohm*m	$>10^{16}$
Surface Resistivity	IEC 62631-3-1	Ohm	$>10^{14}$
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.56
Light Transmission at 550 nm	ASTM D 1003	%	89
Haze	ASTM D 1003	%	2
Other Properties			
Density	ISO 1183	kg/m³	1040
Processing			
Melt Temperature Range	ISO 294	°C	180 - 280
Mold Temperature Range	ISO 294	°C	40
Injection Velocity	ISO 294	mm/s	200