INEOS STYROLUTION

Styrolution PS 168N/L

General Purpose Polystyrene (GPPS)

TECHNICAL DATASHEET

DESCRIPTION

Styrolution PS 168N/L is a high molecular weight, heat resistant grade with high mechanical strength. It is suitable for physically or chemically expanded extruded sheet. It is also suitable for use as blend component with high impact polystyrene or Styrolux.

FEATURES

- High molecular weight
- High heat resistance
- High mechanical strength
- UL 94 HB (Antwerp only)

APPLICATIONS

- Foam sheet for meat & fruit trays
- BOPS sheet

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm^3/10 min	1.5
Mechanical Properties			
Tensile Stress at Yield, 23 °C	ISO 527	MPa	59
Tensile Strain at Break, 23 °C	ISO 527	%	3
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	106
Flexural Modulus, 23 °C	ISO 178	MPa	2280
Hardness, Ball Indentation	ISO 2039-1	MPa	150
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	101
Vicat Softening Temperature, B/1 (120 °C/h, 10N)	ASTM D 1525	°C	108
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	86
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	98
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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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}	0.5
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	-	1.57
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