

STYROLUTION PS 4241

High Impact Polystyrene (HIPS)

TECHNICAL DATASHEET

DESCRIPTION

INEOS STYROLUTION 4241 is a ductile high impact polystyrene for both extrusion and injection molding applications. This grade is especially suitable for the production of articles requiring good rigidity, dimension stability and high stiffness.

FEATURES

- Ductile high impact
- Good rigidity
- Dimension stability
- High stiffness

APPLICATIONS

- Thermoformed Sheet
- Household Appliance
- Food Packaging

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Flow Rate, 200 °C/5 kg	ISO 1133	g/10 min	3.5
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	3.4
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m ²	11.5
Tensile Stress at Yield, 23 °C	ISO 527	MPa	25
Tensile Modulus	ISO 527	MPa	1900
Elongation at Break (MD)	ISO 527	%	55
Flexural Strength, 23 °C	ISO 178	MPa	40
Flexural Modulus, 23 °C	ISO 178	MPa	2150
Hardness, Rockwell	ISO 2039-2	R scale	80
Thermal Properties			
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	95
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	87
Heat Deflection Temperature A; (unannealed; 1.8 MPa)	ISO 75	°C	70
Heat Deflection Temperature B; (unannealed; 0.45 MPa)	ISO 75	°C	80
Coefficient of Linear Thermal Expansion	ISO 11359	10 ⁻⁶ /°C	91
Electrical Properties			

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Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	150
Surface Resistivity	IEC 62631-3-1	Ohm	>10 ¹³
Other Properties			
Density	ISO 1183	kg/m ³	1.04
Bulk Density (without external lubricant)	-	kg/m ³	0.6
Water Absorption, Saturated at 23 °C	ISO 62	%	0.07
UL94 rating at 1.5 mm thickness	IEC 60695-11-10	-	HB
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Drying Temperature	-	°C	70
Drying Time	-	h	2
Max Service Temperature	-	°C	240