

# STYROLUTION PS 3441

High Impact Polystyrene (HIPS)

## TECHNICAL DATASHEET

### DESCRIPTION

INEOS STYROLUTION 3441 is a high heat resistance, high stiffness high impact polystyrene for extrusion and injection molding applications. Due of its ideal balance of properties this grade is well suited for the production of articles requiring good dimension stability at high temperature and short cycle times.

### FEATURES

- High heat resistance
- High stiffness
- High impact
- Ideal balance of properties

### APPLICATIONS

- Home Appliance
- Office Equipment
- Food Package
- Toy

Property, Test Condition	Standard	Unit	Values
<b>Rheological Properties</b>			
Melt Flow Rate, 200 °C/5 kg	ISO 1133	g/10 min	5
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm <sup>3</sup> /10 min	4.8
<b>Mechanical Properties</b>			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m <sup>2</sup>	10.5
Tensile Stress at Yield, 23 °C	ISO 527	MPa	30
Tensile Modulus	ISO 527	MPa	2200
Elongation at Break (MD)	ISO 527	%	45
Flexural Strength, 23 °C	ISO 178	MPa	52
Flexural Modulus, 23 °C	ISO 178	MPa	1900
Hardness, Rockwell	ISO 2039-2	R scale	80
<b>Thermal Properties</b>			
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	100
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	90
Heat Deflection Temperature A; (unannealed; 1.8 MPa)	ISO 75	°C	73
Heat Deflection Temperature B; (unannealed; 0.45 MPa)	ISO 75	°C	85
Coefficient of Linear Thermal Expansion	ISO 11359	10 <sup>-6</sup> /°C	91

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<b>Electrical Properties</b>			
Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	150
Surface Resistivity	IEC 62631-3-1	Ohm	>10 <sup>13</sup>
<b>Optical Properties</b>			
Yellowness Index	DIN 6167	-	-11
<b>Other Properties</b>			
Density	ISO 1183	kg/m <sup>3</sup>	1.04
Bulk Density (without external lubricant)	-	kg/m <sup>3</sup>	0.6
Water Absorption, Saturated at 23 °C	ISO 62	%	0.07
UL94 rating at 1.5 mm thickness	IEC 60695-11-10	-	HB
<b>Processing</b>			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Drying Temperature	-	°C	70
Drying Time	-	h	2
Max Service Temperature	-	°C	240