

# Styrolution PS 5300

High Impact Polystyrene (HIPS)

## TECHNICAL DATASHEET

### FEATURES

- Excellent ESCR
- Free of zinc additives
- Matte, easily decorated finish
- Good toughness
- UL Classification 94 HB

### APPLICATIONS

- Food packaging
- Indoor signs
- Retail displays
- Decorative trim

Property, Test Condition	Standard	Unit	Values
<b>Rheological Properties</b>			
Melt Flow Rate, 200 °C/5 kg	ASTM D 1238	g/10 min	2.6
<b>Mechanical Properties</b>			
Izod Notched Impact Strength, 23 °C (73 °F)	ASTM D 256	ft-lb/in	2.2
Tensile Stress at Yield, 23 °C	ASTM D 638	psi	2560
Tensile Modulus	ASTM D 638	psi x 10 <sup>3</sup>	260
Elongation, Failure	ASTM D 638	%	53
Flexural Strength, 23 °C	ASTM D 790		6000
Flexural Modulus, 23 °C	ASTM D 790	psi x 10 <sup>3</sup>	250
Hardness, Rockwell	ASTM D 785	L Scale	45
<b>Thermal Properties</b>			
Vicat Softening Temperature, B/1 ( 120 °C/h, 10N)	ASTM D 1525	°F	214
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	-	°F	185
Coefficient of Linear Thermal Expansion	ASTM D 696	10 <sup>-4</sup> /°F	0.5
<b>Electrical Properties</b>			
Dielectric Constant at 106 CPS (1000000 Hz, 0,0394 in)	ASTM D 150	-	2.5
Dielectric Strength, 1/8"	ASTM D 149	kV/in	400
<b>Optical Properties</b>			
Specular Gloss, 60 °	ASTM D 523		15
<b>Other Properties</b>			

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Property, Test Condition	Standard	Unit	Values
Density (ASTM )	ASTM D 792	g/cm <sup>3</sup>	1.04
Bulk Density (without external lubricant)	-	lb/ft <sup>3</sup>	37 - 40
Bulk Density (with external lubricant)	-	lb/ft <sup>3</sup>	42 - 45
<b>Processing</b>			
Linear Mold Shrinkage	ASTM D 955	in/in	0.004-0.007
Mold Temperature Range	-	°F	100 - 180
Melt Temperature Range	-	°F	360 - 530