

# Styrolution PS 1300/1301

General Purpose Polystyrene (GPPS)

## TECHNICAL DATASHEET

### FEATURES

- Good balance of flow and strength
- High stiffness
- USP Class VI certified
- UL Classification 94 HB (www.UL.com file E57787)

### APPLICATIONS

- Medical labware
- Appliance accessory parts
- Profile extrusion
- Cosmetic cases

Property, Test Condition	Standard	Unit	Values
<b>Rheological Properties</b>			
Melt Flow Rate, 200 °C/5 kg	ASTM D 1238	g/10 min	3
<b>Mechanical Properties</b>			
Izod Notched Impact Strength, 23 °C (73 °F)	ASTM D 256	ft-lb/in	0.4
Tensile Stress at Yield, 23 °C	ASTM D 638	psi	7100
Tensile Modulus	ASTM D 638	psi x 10 <sup>3</sup>	460
Elongation, Failure	ASTM D 638	%	2
Flexural Strength, 23 °C	ASTM D 790		14500
Flexural Modulus, 23 °C	ASTM D 790	psi x 10 <sup>3</sup>	480
Hardness, Rockwell	ASTM D 785	M scale	76
<b>Thermal Properties</b>			
Vicat Softening Temperature, B/1 ( 120 °C/h, 10N)	ASTM D 1525	°F	223
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	-	°F	200
Coefficient of Linear Thermal Expansion	ASTM D 696	10 <sup>-4</sup> /°F	0.4
<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	500
<b>Optical Properties</b>			
Refractive Index, Sodium D Line	ASTM D 542	-	1.59
Light Transmission at 550 nm	ASTM D 1003	%	88 - 90
Optical Density, 400–700 nm avg.	-	-	0.046

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