

Styrolution PS 3100/3101

General Purpose Polystyrene (GPPS)

TECHNICAL DATASHEET

FEATURES

- Good balance of flow and set-up properties
- Moderate heat resistance
- USP Class VI certified

APPLICATIONS

- Excellent for blending with SBC or HIPS
- Single service cutlery and drinkware
- Co-extruded gloss cap

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Flow Rate, 200 °C/5 kg	ASTM D 1238	g/10 min	10
Mechanical Properties			
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	6500
Tensile Modulus	ASTM D 638	psi x 10 ³	460
Elongation, Failure	ASTM D 638	%	2
Flexural Strength, 23 °C	ASTM D 790		12200
Flexural Modulus, 23 °C	ASTM D 790	psi x 10 ³	480
Hardness, Rockwell	ASTM D 785	M scale	75
Thermal Properties			
Vicat Softening Temperature, B/1 (120 °C/h, 10N)	ASTM D 1525	°F	213
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	-	°F	183
Coefficient of Linear Thermal Expansion	ASTM D 696	10 ⁻⁴ /°F	0.4
Electrical Properties			
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
Optical Properties			
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
Other Properties			

Styrolution PS 3100/3101

General Purpose Polystyrene (GPPS)

TECHNICAL DATASHEET

Property, Test Condition	Standard	Unit	Values
Density (ASTM)	ASTM D 792	g/cm ³	1.04
Bulk Density (without external lubricant)	-	lb/ft ³	37 - 40
Bulk Density (with external lubricant)	-	lb/ft ³	42 - 45
Processing			
Linear Mold Shrinkage	ASTM D 955	in/in	0.004-0.007
Melt Temperature Range	-	°F	375 - 525
Mold Temperature Range	-	°F	100 - 180