

## Overview of materials for Polystyrene, Glass Filled

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Glass Filled

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polystyrene, Glass Filled". Each property range of values reported is minimum and maximum values of appropriate MatWeb entries. The comments report the average value, and number of data points used to calculate the average. The values are not necessarily typical of any specific grade, especially less common values and those that can be most affected by additives or processing methods.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Overview-of-materials-for-Polystyrene-Glass-Filled.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Polystyrene-Glass-Filled.php)

Physical Properties	Metric	English	Comments
Density	1.09 - 1.46 g/cc	0.0394 - 0.0527 lb/in <sup>3</sup>	Average value: 1.23 g/cc Grade Count:23
Filler Content	5.00 - 40.0 %	5.00 - 40.0 %	Average value: 20.0 % Grade Count:11
Water Absorption	0.0500 - 0.900 %	0.0500 - 0.900 %	Average value: 0.145 % Grade Count:11
Linear Mold Shrinkage	0.000500 - 0.0150 cm/cm	0.000500 - 0.0150 in/in	Average value: 0.00252 cm/cm Grade Count:23
Linear Mold Shrinkage, Transverse	0.00150 - 0.00250 cm/cm	0.00150 - 0.00250 in/in	Average value: 0.00200 cm/cm Grade Count:3

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	112 - 121	112 - 121	Average value: 118 Grade Count:10
Tensile Strength, Ultimate	24.1 - 91.0 MPa	3500 - 13200 psi	Average value: 57.5 MPa Grade Count:23
	20.0 - 25.0 MPa @Temperature 60.0 - 60.0 °C	2900 - 3630 psi @Temperature 140 - 140 °F	Average value: 22.5 MPa Grade Count:2
Elongation at Break	0.500 - 8.00 %	0.500 - 8.00 %	Average value: 2.18 % Grade Count:20
Modulus of Elasticity	2.96 - 11.7 GPa	430 - 1700 ksi	Average value: 6.71 GPa Grade Count:14
Flexural Yield Strength	34.5 - 128 MPa	5000 - 18500 psi	Average value: 91.6 MPa Grade Count:20
Flexural Modulus	3.44 - 11.7 GPa	499 - 1700 ksi	Average value: 6.04 GPa Grade Count:23
	3.30 - 3.30 GPa @Temperature 60.0 - 60.0 °C	479 - 479 ksi @Temperature 140 - 140 °F	Average value: 3.30 GPa Grade Count:2

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	0.160 - 1.33 J/cm	0.300 - 2.49 ft-lb/in	Average value: 0.545 J/cm Grade Count:22
	0.300 - 0.450 J/cm @Temperature -40.0 - - 20.0 °C	0.562 - 0.843 ft-lb/in @Temperature -40.0 - - 4.00 °F	Average value: 0.363 J/cm Grade Count:2
Izod Impact, Unnotched	0.534 - 2.94 J/cm	1.00 - 5.51 ft-lb/in	Average value: 1.67 J/cm Grade Count:19
Charpy Impact Unnotched	0.800 - 2.00 J/cm <sup>2</sup>	3.81 - 9.52 ft-lb/in <sup>2</sup>	Average value: 1.53 J/cm <sup>2</sup> Grade Count:3
	1.50 - 2.00 J/cm <sup>2</sup> @Temperature -40.0 - - 20.0 °C	7.14 - 9.52 ft-lb/in <sup>2</sup> @Temperature -40.0 - - 4.00 °F	Average value: 1.77 J/cm <sup>2</sup> Grade Count:2

Thermal Properties	Metric	English	Comments
CTE, linear	30.6 - 59.4 µm/m-°C	17.0 - 33.0 µin/in-°F	Average value: 41.4 µm/m-°C Grade Count:3
Thermal Conductivity	0.166 - 0.317 W/m-K	1.15 - 2.20 BTU-in/hr-ft <sup>2</sup> -°F	Average value: 0.267 W/m-K Grade Count:3
Deflection Temperature at 0.46 MPa (66 psi)	92.0 - 113 °C	198 - 235 °F	Average value: 102 °C Grade Count:16
Deflection Temperature at 1.8 MPa (264 psi)	81.0 - 146 °C	178 - 295 °F	Average value: 94.5 °C Grade Count:19
Vicat Softening Point	90.0 - 95.0 °C	194 - 203 °F	Average value: 92.7 °C Grade Count:3
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:14
Oxygen Index	21.0 - 24.0 %	21.0 - 24.0 %	Average value: 23.0 % Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+11 - 1.00e+16 ohm-cm	1.00e+11 - 1.00e+16 ohm-cm	Average value: 7.78e+15 ohm-cm Grade Count:9
Dielectric Constant	2.60 - 3.50	2.60 - 3.50	Average value: 2.95 Grade Count:3
Dielectric Strength	16.7 - 25.0 kV/mm	425 - 635 kV/in	Average value: 19.6 kV/mm Grade Count:7
Dissipation Factor	0.000700 - 0.00300	0.000700 - 0.00300	Average value: 0.00157 Grade Count:3
Arc Resistance	40.0 - 85.0 sec	40.0 - 85.0 sec	Average value: 66.7 sec Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	204 - 238 °C	400 - 460 °F	Average value: 221 °C Grade Count:6
Melt Temperature	179 - 249 °C	354 - 480 °F	Average value: 221 °C Grade Count:17
Mold Temperature	20.0 - 121 °C	68.0 - 250 °F	Average value: 52.9 °C Grade Count:18
Drying Temperature	60.0 - 82.2 °C	140 - 180 °F	Average value: 77.5 °C Grade Count:11
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:13

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China