

Overview of materials for Polystyrene + Polyphenylene Ether, Glass Filler

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene + Polyphenylene Ether, Glass Filler

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polystyrene + Polyphenylene Ether, Glass Filler". 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-Polyphenylene-Ether-Glass-Filler.php

Physical Properties	Metric	English	Comments
Density	1.15 - 1.45 g/cc	0.0415 - 0.0524 lb/in ³	Average value: 1.27 g/cc Grade Count:18
Water Absorption	0.0600 - 0.100 %	0.0600 - 0.100 %	Average value: 0.0922 % Grade Count:9
Moisture Absorption at Equilibrium	0.00600 - 0.0600 %	0.00600 - 0.0600 %	Average value: 0.0240 % Grade Count:3
Water Absorption at Saturation	0.200 - 0.220 %	0.200 - 0.220 %	Average value: 0.205 % Grade Count:4
Linear Mold Shrinkage	0.00100 - 0.00500 cm/cm	0.00100 - 0.00500 in/in	Average value: 0.00356 cm/cm Grade Count:16
Linear Mold Shrinkage, Transverse	0.00300 - 0.00500 cm/cm	0.00300 - 0.00500 in/in	Average value: 0.00450 cm/cm Grade Count:4
Melt Flow	5.00 - 21.0 g/10 min	5.00 - 21.0 g/10 min	Average value: 15.0 g/10 min Grade Count:10

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	60.0 - 120 MPa	8700 - 17400 psi	Average value: 89.8 MPa Grade Count:13
Tensile Strength, Yield	50.0 - 110 MPa	7250 - 16000 psi	Average value: 82.9 MPa Grade Count:6
Elongation at Break	1.70 - 10.0 %	1.70 - 10.0 %	Average value: 5.01 % Grade Count:17
Modulus of Elasticity	3.80 - 10.6 GPa	551 - 1540 ksi	Average value: 6.83 GPa Grade Count:4
Flexural Yield Strength	80.0 - 190 MPa	11600 - 27600 psi	Average value: 133 MPa Grade Count:18
Flexural Modulus	3.00 - 10.0 GPa	435 - 1450 ksi	Average value: 5.60 GPa Grade Count:18
Izod Impact, Notched	0.641 - 1.23 J/cm	1.20 - 2.30 ft-lb/in	Average value: 0.894 J/cm Grade Count:8
	0.694 - 0.694 J/cm	1.30 - 1.30 ft-lb/in	

Mechanical Properties	Metric @ Temperature -40.0 - - 40.0 °C	English @ Temperature -40.0 - - 40.0 °F	Comments Average value: 0.694 J/cm Grade Count:7
Izod Impact, Unnotched	3.36 - 5.34 J/cm	6.29 - 10.0 ft-lb/in	Average value: 4.04 J/cm Grade Count:5
Izod Impact, Notched (ISO)	7.00 - 15.0 kJ/m ²	3.33 - 7.14 ft-lb/in ²	Average value: 12.5 kJ/m ² Grade Count:11

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	106 - 145 °C	223 - 293 °F	Average value: 128 °C Grade Count:17
UL RTI, Electrical	50.0 - 110 °C	122 - 230 °F	Average value: 90.0 °C Grade Count:3
UL RTI, Mechanical with Impact	50.0 - 105 °C	122 - 221 °F	Average value: 86.7 °C Grade Count:3
UL RTI, Mechanical without Impact	50.0 - 110 °C	122 - 230 °F	Average value: 90.0 °C Grade Count:3
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:6

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 - 1.00e+17 ohm-cm	1.00e+15 - 1.00e+17 ohm-cm	Average value: 2.08e+16 ohm-cm Grade Count:5
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	Average value: 1.00e+15 ohm Grade Count:3
Dielectric Strength	16.5 - 18.0 kV/mm	420 - 457 kV/in	Average value: 17.6 kV/mm Grade Count:4

Processing Properties	Metric	English	Comments
Nozzle Temperature	277 - 316 °C	531 - 601 °F	Average value: 297 °C Grade Count:3
Melt Temperature	243 - 316 °C	469 - 601 °F	Average value: 290 °C Grade Count:7
Mold Temperature	71.1 - 107 °C	160 - 225 °F	Average value: 91.2 °C Grade Count:7
Drying Temperature	104 - 121 °C	219 - 250 °F	Average value: 115 °C Grade Count:7
Moisture Content	0.0200 %	0.0200 %	Average value: 0.0200 % Grade Count:3

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