

Overview of materials for Polyphenylene Sulfide (PPS) with 50% Glass Fiber Filler

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) with 50% Glass Fiber Filler

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polyphenylene Sulfide (PPS) with 50% Glass Fiber Filler". Specific grades with glass content between 45% and 54% are included. 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-Polyphenylene-Sulfide-PPS-with-50-Glass-Fiber-Filler.php

Physical Properties	Metric	English	Comments
Density	1.54 - 1.80 g/cc	0.0556 - 0.0650 lb/in ³	Average value: 1.72 g/cc Grade Count:19
Filler Content	50.0 %	50.0 %	Average value: 50.0 % Grade Count:4
Water Absorption	0.0100 - 0.0200 %	0.0100 - 0.0200 %	Average value: 0.0186 % Grade Count:7
Linear Mold Shrinkage	0.00100 - 0.0100 cm/cm	0.00100 - 0.0100 in/in	Average value: 0.00214 cm/cm Grade Count:13
Linear Mold Shrinkage, Transverse	0.00300 - 0.00850 cm/cm	0.00300 - 0.00850 in/in	Average value: 0.00512 cm/cm Grade Count:6

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	121 - 123	121 - 123	Average value: 123 Grade Count:6
Tensile Strength, Ultimate	36.5 - 200 MPa	5300 - 29000 psi	Average value: 147 MPa Grade Count:17
	94.0 - 179.953 MPa @Temperature -40.0 - 120 °C	13600 - 26100.0 psi @Temperature -40.0 - 248 °F	Average value: 142 MPa Grade Count:3
Elongation at Break	0.400 - 2.20 %	0.400 - 2.20 %	Average value: 1.19 % Grade Count:17
	0.950 - 0.950 % @Temperature -40.0 - 4.44 °C	0.950 - 0.950 % @Temperature -40.0 - 40.0 °F	Average value: 0.950 % Grade Count:2
Modulus of Elasticity	9.65 - 41.7 GPa	1400 - 6050 ksi	Average value: 18.4 GPa Grade Count:14
	21.4427 - 21.4427 GPa @Temperature -40.0 - -	3110.05 - 3110.05 ksi @Temperature -40.0 - -	Average value: 21.4 GPa Grade Count:2

Mechanical Properties	40.0 °C Metric	40.0 °F English	Comments
Flexural Yield Strength	57.9 - 343 MPa	8400 - 49700 psi	Average value: 229 MPa Grade Count:18
	269.585 - 269.585 MPa @Temperature -40.0 - - 40.0 °C	39100.1 - 39100.1 psi @Temperature -40.0 - - 40.0 °F	Average value: 270 MPa Grade Count:2
Flexural Modulus	10.3 - 39.2 GPa	1500 - 5690 ksi	Average value: 16.3 GPa Grade Count:19
	9.55 - 18.6848 GPa @Temperature -40.0 - 120 °C	1390 - 2710.04 ksi @Temperature -40.0 - 248 °F	Average value: 15.7 GPa Grade Count:3
Izod Impact, Notched	0.641 - 3.68 J/cm	1.20 - 6.90 ft-lb/in	Average value: 1.76 J/cm Grade Count:14
	0.700 - 3.7373 J/cm @Temperature -40.0 - - 20.0 °C	1.31 - 7.0015 ft-lb/in @Temperature -40.0 - - 4.00 °F	Average value: 2.22 J/cm Grade Count:3
Izod Impact, Unnotched	3.20 - 5.34 J/cm	6.00 - 10.0 ft-lb/in	Average value: 3.83 J/cm Grade Count:6
Charpy Impact Unnotched	1.20 - 4.00 J/cm ²	5.71 - 19.0 ft-lb/in ²	Average value: 2.33 J/cm ² Grade Count:3
	1.20 - 1.20 J/cm ² @Temperature -40.0 - - 20.0 °C	5.71 - 5.71 ft-lb/in ² @Temperature -40.0 - - 4.00 °F	Average value: 1.20 J/cm ² Grade Count:1
Charpy Impact, Notched	0.600 - 2.80 J/cm ²	2.86 - 13.3 ft-lb/in ²	Average value: 1.49 J/cm ² Grade Count:5

Thermal Properties	Metric	English	Comments
CTE, linear	7.00 - 25.0 µm/m-°C	3.89 - 13.9 µin/in-°F	Average value: 15.7 µm/m-°C Grade Count:3
Melting Point	280 - 282 °C	536 - 540 °F	Average value: 281 °C Grade Count:3
Deflection Temperature at 0.46 MPa (66 psi)	266 - 280 °C	510 - 536 °F	Average value: 270 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	260 - 282 °C	500 - 540 °F	Average value: 267 °C Grade Count:17
Flammability, UL94	V-0	V-0	Grade Count:12

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 - 2.00e+16 ohm-cm	1.00e+15 - 2.00e+16 ohm-cm	Average value: 1.01e+16 ohm-cm Grade Count:7
Dielectric Constant	3.80 - 5.00	3.80 - 5.00	Average value: 4.18 Grade Count:3

Electrical Properties	Metric	English	Comments
Dielectric Strength	12.0 - 16.0 kV/mm	300 - 400 kV/in	Average value: 13.7 kV/mm Grade Count:3
Dissipation Factor	0.00100 - 0.00500	0.00100 - 0.00500	Average value: 0.00227 Grade Count:3
Comparative Tracking Index	125 - 175 V	125 - 175 V	Average value: 155 V Grade Count:3

Processing Properties	Metric	English	Comments
Processing Temperature	70.0 - 340 °C	158 - 644 °F	Average value: 233 °C Grade Count:9
Die Temperature	290 - 345 °C	554 - 653 °F	Average value: 312 °C Grade Count:5
Melt Temperature	20.0 - 345 °C	68.0 - 653 °F	Average value: 286 °C Grade Count:11
Mold Temperature	130 - 177 °C	266 - 350 °F	Average value: 149 °C Grade Count:11
Drying Temperature	130 - 149 °C	266 - 300 °F	Average value: 138 °C Grade Count:8
Moisture Content	0.0200 - 0.0400 %	0.0200 - 0.0400 %	Average value: 0.0257 % Grade Count:7
Injection Pressure	50.0 - 103 MPa	7250 - 15000 psi	Average value: 82.5 MPa Grade Count:9

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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