

Overview of materials for Polyphenylene Sulfide (PPS) with 20% Glass Fiber Filler

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) with 20% 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 20% Glass Fiber Filler". Specific grades with glass content between 15% and 24% 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-20-Glass-Fiber-Filler.php

Physical Properties	Metric	English	Comments
Density	1.30 - 1.58 g/cc	0.0470 - 0.0571 lb/in ³	Average value: 1.46 g/cc Grade Count:17
Filler Content	15.0 - 20.0 %	15.0 - 20.0 %	Average value: 17.5 % Grade Count:6
Water Absorption	0.0100 - 0.0200 %	0.0100 - 0.0200 %	Average value: 0.0183 % Grade Count:6
	0.0300 - 0.0300 % @Temperature -17.8 - -17.8 °C	0.0300 - 0.0300 % @Temperature 0.000 - 0.000 °F	Average value: 0.0300 % Grade Count:1
Water Absorption at Saturation	0.0200 %	0.0200 %	Average value: 0.0200 % Grade Count:6
Linear Mold Shrinkage	0.00100 - 0.00700 cm/cm	0.00100 - 0.00700 in/in	Average value: 0.00342 cm/cm Grade Count:11
Linear Mold Shrinkage, Transverse	0.00400 - 0.0100 cm/cm	0.00400 - 0.0100 in/in	Average value: 0.00650 cm/cm Grade Count:4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	100 - 118	100 - 118	Average value: 104 Grade Count:4
Hardness, Rockwell R	87.0 - 121	87.0 - 121	Average value: 110 Grade Count:3
Tensile Strength, Ultimate	86.0 - 130 MPa	12500 - 18900 psi	Average value: 111 MPa Grade Count:16
Elongation at Break	1.00 - 2.90 %	1.00 - 2.90 %	Average value: 1.77 % Grade Count:16
Modulus of Elasticity	5.00 - 9.65 GPa	725 - 1400 ksi	Average value: 7.89 GPa Grade Count:11
Flexural Yield Strength	113 - 200 MPa	16400 - 29000 psi	Average value: 160 MPa Grade Count:16

Mechanical Properties	Metric ^{9.31 GPa}	English ^{350 ksi}	Comments ^{Average value: 7.66 GPa Grade Count:11}
Izod Impact, Notched	0.427 - 1.92 J/cm	0.800 - 3.60 ft-lb/in	Average value: 0.771 J/cm Grade Count:11
Izod Impact, Unnotched	2.14 - 6.90 J/cm	4.00 - 12.9 ft-lb/in	Average value: 3.23 J/cm Grade Count:8
Izod Impact, Notched (ISO)	5.20 - 35.0 kJ/m ²	2.47 - 16.7 ft-lb/in ²	Average value: 10.8 kJ/m ² Grade Count:7
Izod Impact, Unnotched (ISO)	35.0 - 45.0 kJ/m ²	16.7 - 21.4 ft-lb/in ²	Average value: 38.3 kJ/m ² Grade Count:3
Charpy Impact Unnotched	3.20 - 4.80 J/cm ²	15.2 - 22.8 ft-lb/in ²	Average value: 3.73 J/cm ² Grade Count:3
Charpy Impact, Notched	0.500 - 1.40 J/cm ²	2.38 - 6.66 ft-lb/in ²	Average value: 0.800 J/cm ² Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	23.4 - 30.0 μm/m-°C	13.0 - 16.7 μin/in-°F	Average value: 26.4 μm/m-°C Grade Count:4
	20.0 - 20.0 μm/m-°C @Temperature 100 - 200 °C	11.1 - 11.1 μin/in-°F @Temperature 212 - 392 °F	Average value: 20.0 μm/m-°C Grade Count:1
CTE, linear, Transverse to Flow	53.0 - 63.4 μm/m-°C	29.4 - 35.2 μin/in-°F	Average value: 57.1 μm/m-°C Grade Count:3
	90.0 - 90.0 μm/m-°C @Temperature 100 - 200 °C	50.0 - 50.0 μin/in-°F @Temperature 212 - 392 °F	Average value: 90.0 μm/m-°C Grade Count:1
Melting Point	278 - 280 °C	532 - 536 °F	Average value: 280 °C Grade Count:4
Deflection Temperature at 0.46 MPa (66 psi)	246 - 280 °C	475 - 536 °F	Average value: 262 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	190 - 265 °C	374 - 509 °F	Average value: 249 °C Grade Count:16
Flammability, UL94	V-0	V-0	Grade Count:13

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 - 2.20e+16 ohm-cm	1.00e+14 - 2.20e+16 ohm-cm	Average value: 8.01e+15 ohm-cm Grade Count:8
Surface Resistance	1.00e+15 - 1.00e+16 ohm	1.00e+15 - 1.00e+16 ohm	Average value: 4.56e+15 ohm Grade Count:5
Insulation Resistance	1.00e+13 - 1.00e+13 ohm @Temperature 90.0 -	1.00e+13 - 1.00e+13 ohm @Temperature 194 -	Average value: 1.00e+13 ohm Grade Count:1

Electrical Properties	90.0 °C Metric	194 °F English	Comments
Dielectric Constant	3.20 - 3.60	3.20 - 3.60	Average value: 3.41 Grade Count:6
Dielectric Strength	13.8 - 24.0 kV/mm	350 - 610 kV/in	Average value: 16.0 kV/mm Grade Count:6
Dissipation Factor	0.00100 - 0.00500	0.00100 - 0.00500	Average value: 0.00186 Grade Count:6
Arc Resistance	100 - 120 sec	100 - 120 sec	Average value: 110 sec Grade Count:4

Processing Properties	Metric	English	Comments
Processing Temperature	20.0 - 340 °C	68.0 - 644 °F	Average value: 215 °C Grade Count:5
Die Temperature	310 - 330 °C	590 - 626 °F	Average value: 320 °C Grade Count:4
Melt Temperature	20.0 - 340 °C	68.0 - 644 °F	Average value: 292 °C Grade Count:12
Mold Temperature	130 - 177 °C	266 - 350 °F	Average value: 154 °C Grade Count:8
Drying Temperature	80.0 - 149 °C	176 - 300 °F	Average value: 139 °C Grade Count:11
Moisture Content	0.0200 - 0.0400 %	0.0200 - 0.0400 %	Average value: 0.0320 % Grade Count:10
Injection Pressure	50.0 - 103 MPa	7250 - 15000 psi	Average value: 82.1 MPa Grade Count:11

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