

Overview of materials for Polyphenylene Sulfide (PPS) with 40% Carbon Fiber Filler

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) with 40% Carbon Fiber Filler

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polyphenylene Sulfide (PPS) with 40% Carbon Fiber Filler". Specific grades with carbon fiber content between 35% and 44% 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-40-Carbon-Fiber-Filler.php

Physical Properties	Metric	English	Comments
Density	1.48 - 1.60 g/cc	0.0535 - 0.0578 lb/in ³	Average value: 1.52 g/cc Grade Count:12
Filler Content	40.0 %	40.0 %	Average value: 40.0 % Grade Count:10
Water Absorption	0.0200 %	0.0200 %	Average value: 0.0200 % Grade Count:3
Linear Mold Shrinkage	0.000500 - 0.00200 cm/cm	0.000500 - 0.00200 in/in	Average value: 0.000692 cm/cm Grade Count:11

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	77.2 - 234 MPa	11200 - 34000 psi	Average value: 175 MPa Grade Count:12
	100 - 160 MPa @Temperature 60.0 - 150 °C	14500 - 23200 psi @Temperature 140 - 302 °F	Average value: 131 MPa Grade Count:1
Elongation at Break	0.000 - 1.20 %	0.000 - 1.20 %	Average value: 0.846 % Grade Count:12
	0.500 - 1.20 % @Temperature 60.0 - 150 °C	0.500 - 1.20 % @Temperature 140 - 302 °F	Average value: 0.875 % Grade Count:1
Modulus of Elasticity	12.4 - 45.0 GPa	1800 - 6530 ksi	Average value: 33.5 GPa Grade Count:11
	15.0 - 42.0 GPa @Temperature 60.0 - 150 °C	2180 - 6090 ksi @Temperature 140 - 302 °F	Average value: 29.5 GPa Grade Count:1
Flexural Yield Strength	126 - 317 MPa	18300 - 46000 psi	Average value: 249 MPa Grade Count:11

Mechanical Properties	Metric	English	Comments
	21.0 GPa	1500 ksi	Average value: 26.6 GPa Grade Count:11
Izod Impact, Notched	0.278 - 0.641 J/cm	0.520 - 1.20 ft-lb/in	Average value: 0.508 J/cm Grade Count:10
Izod Impact, Unnotched	1.60 - 4.86 J/cm	3.00 - 9.10 ft-lb/in	Average value: 3.59 J/cm Grade Count:9

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	260 - 280 °C	500 - 536 °F	Average value: 267 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	260 - 270 °C	500 - 518 °F	Average value: 265 °C Grade Count:11
Flammability, UL94	V-0	V-0	Grade Count:10

Electrical Properties	Metric	English	Comments
Electrical Resistivity	10.0 ohm-cm - 1e+05	10.0 ohm-cm - 1e+05	Average value: 626 ohm-cm Grade Count:10

Processing Properties	Metric	English	Comments
Melt Temperature	290 - 329 °C	554 - 625 °F	Average value: 316 °C Grade Count:8
Mold Temperature	130 - 177 °C	266 - 350 °F	Average value: 154 °C Grade Count:10
Drying Temperature	130 - 150 °C	266 - 302 °F	Average value: 148 °C Grade Count:8
Moisture Content	0.0400 %	0.0400 %	Average value: 0.0400 % Grade Count:7
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:9

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