

Overview of materials for Polyphenylene Sulfide (PPS) with 30% Carbon Fiber Filler

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) with 30% 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 30% Carbon Fiber Filler". Specific grades with carbon fiber content between 25% and 34% 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-30-Carbon-Fiber-Filler.php

Physical Properties	Metric	English	Comments
Density	1.43 - 1.58 g/cc	0.0517 - 0.0571 lb/in ³	Average value: 1.49 g/cc Grade Count:24
Filler Content	30.0 - 45.0 %	30.0 - 45.0 %	Average value: 31.3 % Grade Count:18
Water Absorption	0.0200 - 0.0500 %	0.0200 - 0.0500 %	Average value: 0.0300 % Grade Count:5
Additive Loading	25.0 - 30.0 %	25.0 - 30.0 %	Average value: 28.3 % Grade Count:3
Linear Mold Shrinkage	0.000200 - 0.00400 cm/cm	0.000200 - 0.00400 in/in	Average value: 0.000985 cm/cm Grade Count:19

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	40.0 - 224 MPa	5800 - 32500 psi	Average value: 164 MPa Grade Count:22
	70.0 - 165 MPa @Temperature 60.0 - 150 °C	10200 - 23900 psi @Temperature 140 - 302 °F	Average value: 113 MPa Grade Count:1
Elongation at Break	0.500 - 3.00 %	0.500 - 3.00 %	Average value: 1.21 % Grade Count:24
	0.900 - 1.80 % @Temperature 60.0 - 150 °C	0.900 - 1.80 % @Temperature 140 - 302 °F	Average value: 1.40 % Grade Count:1
Modulus of Elasticity	4.83 - 33.8 GPa	700 - 4900 ksi	Average value: 23.6 GPa Grade Count:21
	11.0 - 23.5 GPa @Temperature 60.0 - 150 °C	1600 - 3410 ksi @Temperature 140 - 302 °F	Average value: 17.6 GPa Grade Count:1
Flexural Yield Strength			Average value: 234 MPa Grade

Mechanical Properties	66.2 - 297 MPa Metric	9600 - 43100 psi English	Count:23 Comments
Flexural Modulus	8.27 - 25.5 GPa	1200 - 3700 ksi	Average value: 21.1 GPa Grade Count:23
Compressive Yield Strength	30.3 - 190 MPa	4400 - 27600 psi	Average value: 121 MPa Grade Count:4
Compressive Modulus	1.59 - 5.24 GPa	230 - 760 ksi	Average value: 3.49 GPa Grade Count:3
Izod Impact, Notched	0.310 - 2.51 J/cm	0.580 - 4.70 ft-lb/in	Average value: 0.617 J/cm Grade Count:21
Izod Impact, Unnotched	3.20 - 4.65 J/cm	6.00 - 8.71 ft-lb/in	Average value: 3.82 J/cm Grade Count:17

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	260 - 270 °C	500 - 518 °F	Average value: 264 °C Grade Count:20
Flammability, UL94	V-0	V-0	Grade Count:19

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.100 ohm-cm - 1e+05	0.100 ohm-cm - 1e+05	Average value: 1160 ohm-cm Grade Count:17
Surface Resistance	10.0 - 10000 ohm	10.0 - 10000 ohm	Average value: 2970 ohm Grade Count:6

Processing Properties	Metric	English	Comments
Melt Temperature	290 - 343 °C	554 - 650 °F	Average value: 319 °C Grade Count:17
Mold Temperature	130 - 177 °C	266 - 350 °F	Average value: 154 °C Grade Count:18
Drying Temperature	121 - 150 °C	250 - 302 °F	Average value: 143 °C Grade Count:16
Moisture Content	0.0400 %	0.0400 %	Average value: 0.0400 % Grade Count:12
Injection Pressure	68.9 - 124 MPa	10000 - 18000 psi	Average value: 90.5 MPa Grade Count:16

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