

Overview of materials for Polyphenylene Sulfide (PPS), Stainless Steel Fiber

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS), Stainless Steel Fiber

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polyphenylene Sulfide (PPS), Stainless Steel Fiber". 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-Stainless-Steel-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.41 - 1.79 g/cc	0.0509 - 0.0647 lb/in ³	Average value: 1.61 g/cc Grade Count:10
Water Absorption	0.0200 - 0.600 %	0.0200 - 0.600 %	Average value: 0.407 % Grade Count:3
Linear Mold Shrinkage	0.00200 - 0.0160 cm/cm	0.00200 - 0.0160 in/in	Average value: 0.00520 cm/cm Grade Count:7
Linear Mold Shrinkage, Transverse	0.0100 cm/cm	0.0100 in/in	Average value: 0.0100 cm/cm Grade Count:3

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	47.0 - 117 MPa	6820 - 17000 psi	Average value: 83.8 MPa Grade Count:8
Elongation at Break	0.500 - 2.00 %	0.500 - 2.00 %	Average value: 1.43 % Grade Count:8
Modulus of Elasticity	3.79 - 12.4 GPa	550 - 1800 ksi	Average value: 7.63 GPa Grade Count:8
Flexural Yield Strength	103 - 207 MPa	15000 - 30000 psi	Average value: 153 MPa Grade Count:10
Flexural Modulus	4.00 - 13.8 GPa	580 - 2000 ksi	Average value: 9.50 GPa Grade Count:10
Izod Impact, Notched	0.267 - 0.801 J/cm	0.500 - 1.50 ft-lb/in	Average value: 0.493 J/cm Grade Count:9
Izod Impact, Unnotched	1.60 - 3.20 J/cm	3.00 - 5.99 ft-lb/in	Average value: 2.25 J/cm Grade Count:7
K (wear) Factor	10100 x 10 ⁻⁸ mm ³ /N-M	5000 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	Average value: 10100 x 10 ⁻⁸ mm ³ /N-M Grade Count:3

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	254 - 260 °C	489 - 500 °F	Average value: 257 °C Grade Count:6

Flammability: UL 94 Thermal Properties	V-0 Metric	V-0 English	Grade Count:6 Comments
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Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00 - 1.00e+7 ohm-cm	1.00 - 1.00e+7 ohm-cm	Average value: 1.11e+6 ohm-cm Grade Count:9
Surface Resistance	100 - 1.00e+7 ohm	100 - 1.00e+7 ohm	Average value: 1.84e+6 ohm Grade Count:6
Static Decay	0.500 - 2.00 sec	0.500 - 2.00 sec	Average value: 1.00 sec Grade Count:3

Processing Properties	Metric	English	Comments
Melt Temperature	300 - 329 °C	572 - 625 °F	Average value: 313 °C Grade Count:4
Mold Temperature	135 - 177 °C	275 - 350 °F	Average value: 156 °C Grade Count:4
Drying Temperature	149 - 270 °C	300 - 518 °F	Average value: 178 °C Grade Count:4
Moisture Content	0.0400 - 0.200 %	0.0400 - 0.200 %	Average value: 0.0800 % Grade Count:4
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:4

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