

Overview of materials for Polyphenylene Sulfide (PPS), Conductive

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS), Conductive

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.29 - 3.70 g/cc	0.0466 - 0.134 lb/in ³	Average value: 1.70 g/cc Grade Count:18
Filler Content	15.0 - 40.0 %	15.0 - 40.0 %	Average value: 27.9 % Grade Count:7
Water Absorption	0.0200 - 0.200 %	0.0200 - 0.200 %	Average value: 0.0600 % Grade Count:6
Linear Mold Shrinkage	0.000 - 0.00600 cm/cm	0.000 - 0.00600 in/in	Average value: 0.00210 cm/cm Grade Count:18

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	116 - 120	116 - 120	Average value: 118 Grade Count:6
Tensile Strength, Ultimate	45.0 - 172 MPa	6530 - 25000 psi	Average value: 112 MPa Grade Count:16
Elongation at Break	0.300 - 100 %	0.300 - 100 %	Average value: 6.78 % Grade Count:18
Modulus of Elasticity	11.0 - 26.2 GPa	1600 - 3800 ksi	Average value: 17.2 GPa Grade Count:9
Flexural Yield Strength	86.2 - 241 MPa	12500 - 35000 psi	Average value: 181 MPa Grade Count:17
Flexural Modulus	0.552 - 25.5 GPa	80.0 - 3700 ksi	Average value: 14.4 GPa Grade Count:18
Izod Impact, Notched	0.267 - 0.854 J/cm	0.500 - 1.60 ft-lb/in	Average value: 0.483 J/cm Grade Count:9
Izod Impact, Unnotched	0.747 - 4.00 J/cm	1.40 - 7.49 ft-lb/in	Average value: 2.26 J/cm Grade Count:10

Thermal Properties	Metric	English	Comments
CTE, linear	19.8 µm/m-°C	11.0 µin/in-°F	Average value: 19.8 µm/m-°C Grade Count:3
Melting Point	280 - 290 °C	536 - 554 °F	Average value: 283 °C Grade Count:5

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	274 °C	525 °F	Average value: 266 °C Grade Count:6
Deflection Temperature at 1.8 MPa (264 psi)	220 - 268 °C	428 - 514 °F	Average value: 250 °C Grade Count:10
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:7

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00 ohm-cm - 1e+05	1.00 ohm-cm - 1e+05	Average value: 180 ohm-cm Grade Count:16
Surface Resistance	1.00 - 1.00e+6 ohm	1.00 - 1.00e+6 ohm	Average value: 48800 ohm Grade Count:16
Static Decay	0.500 - 2.00 sec	0.500 - 2.00 sec	Average value: 1.81 sec Grade Count:8

Processing Properties	Metric	English	Comments
Melt Temperature	307 - 329 °C	585 - 625 °F	Average value: 319 °C Grade Count:9
Mold Temperature	135 - 177 °C	275 - 350 °F	Average value: 156 °C Grade Count:9
Drying Temperature	149 °C	300 °F	Average value: 149 °C Grade Count:9
Moisture Content	0.0400 %	0.0400 %	Average value: 0.0400 % Grade Count:9
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:9

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