

Overview of materials for Polyphenylene Sulfide (PPS) Alloy, Glass Reinforced, Flow Enhanced

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) Alloy, Glass Reinforced, Flow Enhanced

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.29 - 1.70 g/cc	0.0466 - 0.0614 lb/in ³	Average value: 1.53 g/cc Grade Count:11
Water Absorption	0.0300 - 0.300 %	0.0300 - 0.300 %	Average value: 0.127 % Grade Count:4
Linear Mold Shrinkage	0.00100 - 0.00500 cm/cm	0.00100 - 0.00500 in/in	Average value: 0.00309 cm/cm Grade Count:11
Linear Mold Shrinkage, Transverse	0.00500 - 0.00600 cm/cm	0.00500 - 0.00600 in/in	Average value: 0.00550 cm/cm Grade Count:4
Spiral Flow	25.0 - 25.0 cm @Temperature 300 - 300 °C	9.84 - 9.84 in @Temperature 572 - 572 °F	Average value: 25.0 cm Grade Count:1

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	115 - 120	115 - 120	Average value: 119 Grade Count:5
Tensile Strength, Ultimate	112 - 195 MPa	16200 - 28300 psi	Average value: 150 MPa Grade Count:11
Elongation at Break	1.40 - 5.00 %	1.40 - 5.00 %	Average value: 3.03 % Grade Count:11
Flexural Yield Strength	202 - 275 MPa	29300 - 39900 psi	Average value: 224 MPa Grade Count:11
Flexural Modulus	9.30 - 22.0 GPa	1350 - 3190 ksi	Average value: 14.4 GPa Grade Count:11
Compressive Yield Strength	195 - 225 MPa	28300 - 32600 psi	Average value: 211 MPa Grade Count:4
Izod Impact, Notched	0.430 - 1.00 J/cm	0.806 - 1.87 ft-lb/in	Average value: 0.731 J/cm Grade Count:11
Izod Impact, Unnotched	1.60 - 8.00 J/cm	3.00 - 15.0 ft-lb/in	Average value: 4.41 J/cm Grade Count:11

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 - 22.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	10.0 - 12.2 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Average value: 20.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:4
	18.0 - 39.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 100 - 200 $^{\circ}\text{C}$	10.0 - 21.7 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 212 - 392 $^{\circ}\text{F}$	Average value: 28.5 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:4
CTE, linear, Transverse to Flow	50.0 - 63.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	27.8 - 35.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Average value: 56.5 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:4
	92.0 - 110 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 100 - 200 $^{\circ}\text{C}$	51.1 - 61.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 212 - 392 $^{\circ}\text{F}$	Average value: 101 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:4
Melting Point	280 - 290 $^{\circ}\text{C}$	536 - 554 $^{\circ}\text{F}$	Average value: 284 $^{\circ}\text{C}$ Grade Count:6
Deflection Temperature at 0.46 MPa (66 psi)	250 - 271 $^{\circ}\text{C}$	482 - 520 $^{\circ}\text{F}$	Average value: 261 $^{\circ}\text{C}$ Grade Count:6
Deflection Temperature at 1.8 MPa (264 psi)	229 - 260 $^{\circ}\text{C}$	444 - 500 $^{\circ}\text{F}$	Average value: 246 $^{\circ}\text{C}$ Grade Count:11
Flammability, UL94	V-0	V-0	Grade Count:3

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.80 - 4.50	3.80 - 4.50	Average value: 4.05 Grade Count:5
Dielectric Strength	17.0 - 27.0 kV/mm	432 - 686 kV/in	Average value: 23.0 kV/mm Grade Count:5
Dissipation Factor	0.00200 - 0.0300	0.00200 - 0.0300	Average value: 0.0136 Grade Count:5
Arc Resistance	100 - 116 sec	100 - 116 sec	Average value: 108 sec Grade Count:4
Comparative Tracking Index	150 - 275 V	150 - 275 V	Average value: 225 V Grade Count:5

Processing Properties	Metric	English	Comments
Melt Temperature	299 - 330 $^{\circ}\text{C}$	570 - 626 $^{\circ}\text{F}$	Average value: 308 $^{\circ}\text{C}$ Grade Count:6

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