

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

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) with 30% Glass 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% Glass Fiber Filler". Specific grades with glass 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-Glass-Fiber-Filler.php

Physical Properties	Metric	English	Comments
Density	0.000809 - 1.69 g/cc	0.0000292 - 0.0611 lb/in ³	Average value: 1.46 g/cc Grade Count:26
Filler Content	25.0 - 33.0 %	25.0 - 33.0 %	Average value: 29.8 % Grade Count:11
Water Absorption	0.0100 - 0.0500 %	0.0100 - 0.0500 %	Average value: 0.0245 % Grade Count:11
Linear Mold Shrinkage	0.000200 - 0.0100 cm/cm	0.000200 - 0.0100 in/in	Average value: 0.00308 cm/cm Grade Count:21
Linear Mold Shrinkage, Transverse	0.00500 - 0.00950 cm/cm	0.00500 - 0.00950 in/in	Average value: 0.00752 cm/cm Grade Count:11

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	86.0 - 100	86.0 - 100	Average value: 96.9 Grade Count:5
Hardness, Rockwell R	110 - 123	110 - 123	Average value: 119 Grade Count:4
Tensile Strength, Ultimate	33.1 - 203 MPa	4800 - 29400 psi	Average value: 140 MPa Grade Count:27
	95.0 - 173.058 MPa @Temperature -40.0 - 120 °C	13800 - 25100.0 psi @Temperature -40.0 - 248 °F	Average value: 125 MPa Grade Count:2
Elongation at Break	0.500 - 4.00 %	0.500 - 4.00 %	Average value: 1.64 % Grade Count:26
	1.30 - 1.30 % @Temperature -40.0 - 40.0 °C	1.30 - 1.30 % @Temperature -40.0 - 40.0 °F	Average value: 1.30 % Grade Count:1
Modulus of Elasticity	6.89 - 31.8 GPa	1000 - 4620 ksi	Average value: 13.8 GPa Grade Count:20

Mechanical Properties	Metric	English	Comments
	15.1685 - 15.1685 GPa @Temperature -40.0 - - 40.0 °C	2200.03 - 2200.03 ksi @Temperature -40.0 - - 40.0 °F	Average value: 15.2 GPa Grade Count:1
Flexural Yield Strength	53.1 - 339 MPa	7700 - 49200 psi	Average value: 208 MPa Grade Count:25
	234.422 - 234.422 MPa @Temperature -40.0 - - 40.0 °C	34000.1 - 34000.1 psi @Temperature -40.0 - - 40.0 °F	Average value: 234 MPa Grade Count:1
Flexural Modulus	4.14 - 30.1 GPa	600 - 4360 ksi	Average value: 11.4 GPa Grade Count:26
	6.50 - 12.1348 GPa @Temperature -40.0 - 120 °C	943 - 1760.03 ksi @Temperature -40.0 - 248 °F	Average value: 9.41 GPa Grade Count:2
Izod Impact, Notched	0.267 - 3.15 J/cm	0.500 - 5.90 ft-lb/in	Average value: 0.921 J/cm Grade Count:20
	0.750 - 3.2034 J/cm @Temperature -40.0 - - 20.0 °C	1.41 - 6.0013 ft-lb/in @Temperature -40.0 - - 4.00 °F	Average value: 1.57 J/cm Grade Count:2
Izod Impact, Unnotched	2.14 - 6.90 J/cm	4.00 - 12.9 ft-lb/in	Average value: 4.31 J/cm Grade Count:14
Izod Impact, Notched (ISO)	9.00 - 30.0 kJ/m ²	4.28 - 14.3 ft-lb/in ²	Average value: 13.7 kJ/m ² Grade Count:6
	8.00 - 9.00 kJ/m ² @Temperature -30.0 - - 30.0 °C	3.81 - 4.28 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 8.50 kJ/m ² Grade Count:2
Izod Impact, Unnotched (ISO)	45.0 - 52.0 kJ/m ²	21.4 - 24.7 ft-lb/in ²	Average value: 48.3 kJ/m ² Grade Count:3
Charpy Impact Unnotched	1.60 - 4.20 J/cm ²	7.61 - 20.0 ft-lb/in ²	Average value: 2.80 J/cm ² Grade Count:4
	1.60 - 4.20 J/cm ² @Temperature -40.0 - - 20.0 °C	7.61 - 20.0 ft-lb/in ² @Temperature -40.0 - - 4.00 °F	Average value: 2.70 J/cm ² Grade Count:3
Charpy Impact, Notched	0.600 - 1.45 J/cm ²	2.86 - 6.90 ft-lb/in ²	Average value: 0.950 J/cm ² Grade Count:5
	0.800 - 1.00 J/cm ² @Temperature -30.0 - - 30.0 °C	3.81 - 4.76 ft-lb/in ² @Temperature -22.0 - - 22.0 °F	Average value: 0.900 J/cm ² Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	9.00 - 370 µm/m-°C	5.00 - 206 µin/in-°F	Average value: 66.6 µm/m-°C Grade Count:8

Thermal Properties	Metric	English	Comments
	10.0 - 52.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	5.99 - 28.9 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average value: 31.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ Grade Count:2
	@Temperature 100 - 200 °C	@Temperature 212 - 392 °F	
CTE, linear, Transverse to Flow	34.0 - 2980 $\mu\text{m}/\text{m}\cdot\text{°C}$	18.9 - 1660 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average value: 473 $\mu\text{m}/\text{m}\cdot\text{°C}$ Grade Count:7
	90.0 - 125 $\mu\text{m}/\text{m}\cdot\text{°C}$	50.0 - 69.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	Average value: 108 $\mu\text{m}/\text{m}\cdot\text{°C}$ Grade Count:2
	@Temperature 100 - 200 °C	@Temperature 212 - 392 °F	
Melting Point	260 - 282 °C	500 - 540 °F	Average value: 277 °C Grade Count:6
Deflection Temperature at 0.46 MPa (66 psi)	200 - 280 °C	392 - 536 °F	Average value: 264 °C Grade Count:5
Deflection Temperature at 1.8 MPa (264 psi)	105 - 270 °C	221 - 518 °F	Average value: 255 °C Grade Count:23
Glass Transition Temp, Tg	90.0 °C	194 °F	Average value: 90.0 °C Grade Count:3
Flammability, UL94	V-0	V-0	Grade Count:17

Electrical Properties	Metric	English	Comments
Electrical Resistivity	100 - 1.00e+18 ohm-cm	100 - 1.00e+18 ohm-cm	Average value: 7.19e+16 ohm-cm Grade Count:13
Surface Resistance	1000 - 1.00e+16 ohm	1000 - 1.00e+16 ohm	Average value: 3.07e+15 ohm Grade Count:8
Insulation Resistance	1.00e+11 - 1.00e+11 ohm	1.00e+11 - 1.00e+11 ohm	Average value: 1.00e+11 ohm Grade Count:1
	@Temperature 90.0 - 90.0 °C	@Temperature 194 - 194 °F	
Dielectric Constant	3.00 - 4.00	3.00 - 4.00	Average value: 3.57 Grade Count:7
Dielectric Strength	13.0 - 22.0 kV/mm	330 - 559 kV/in	Average value: 16.5 kV/mm Grade Count:6
Dissipation Factor	0.00100 - 0.00900	0.00100 - 0.00900	Average value: 0.00256 Grade Count:9
Arc Resistance	97.0 - 127 sec	97.0 - 127 sec	Average value: 120 sec Grade Count:6
Comparative Tracking Index	100 - 155 V	100 - 155 V	Average value: 141 V Grade Count:5

Processing Properties	Metric	English	Comments
Processing Temperature	20.0 - 340 °C	68.0 - 644 °F	Average value: 207 °C Grade Count:9
Die Temperature	290 - 345 °C	554 - 653 °F	Average value: 318 °C Grade Count:7
Melt Temperature	20.0 - 345 °C	68.0 - 653 °F	Average value: 292 °C Grade Count:19

Processing Properties	Metric	English	Comments
Mold Temperature	130 - 177 °C	266 - 350 °F	Average value: 151 °C Grade Count:17
Drying Temperature	110 - 150 °C	230 - 302 °F	Average value: 140 °C Grade Count:19
Moisture Content	0.0200 - 0.0400 %	0.0200 - 0.0400 %	Average value: 0.0314 % Grade Count:14
Injection Pressure	50.0 - 103 MPa	7250 - 15000 psi	Average value: 82.5 MPa Grade Count:15

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China