

Overview of materials for Polysulfone, 30% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polysulfone (PSU) , Polysulfone, 30% Glass Fiber Reinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polysulfone, 30% Glass Fiber Reinforced".

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-Polysulfone-30-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.46 - 1.60 g/cc	0.0527 - 0.0578 lb/in ³	Average value: 1.51 g/cc Grade Count:9
Filler Content	30.0 %	30.0 %	Average value: 30.0 % Grade Count:4
Water Absorption	0.100 - 0.600 %	0.100 - 0.600 %	Average value: 0.303 % Grade Count:6
Linear Mold Shrinkage	0.00100 - 0.00300 cm/cm	0.00100 - 0.00300 in/in	Average value: 0.00221 cm/cm Grade Count:9
Linear Mold Shrinkage, Transverse	0.00450 - 0.00600 cm/cm	0.00450 - 0.00600 in/in	Average value: 0.00528 cm/cm Grade Count:3
Melt Flow	5.50 - 30.0 g/10 min	5.50 - 30.0 g/10 min	Average value: 12.5 g/10 min Grade Count:4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	50.0 - 121 MPa	7250 - 17500 psi	Average value: 104 MPa Grade Count:9
	52.0 - 125 MPa	7540 - 18100 psi	Average value: 78.5 MPa Grade Count:2
	@Temperature 0.000 - 160 °C	@Temperature 32.0 - 320 °F	
	50.0 - 55.0 MPa	7250 - 7980 psi	Average value: 78.5 MPa Grade Count:1
	@Temperature 160 - 160 °C	@Temperature 320 - 320 °F	
	50.0 - 55.0 MPa	7250 - 7980 psi	Average value: 78.5 MPa Grade Count:1
	@Strain 1.00 - 1.70 %	@Strain 1.00 - 1.70 %	
Elongation at Break	1.70 - 3.00 %	1.70 - 3.00 %	Average value: 2.19 % Grade Count:9
	1.60 - 1.80 %	1.60 - 1.80 %	Average value: 1.73 % Grade Count:1
	@Temperature 60.0 -	@Temperature 140 -	

Mechanical Properties	150 °C Metric	302 °F English	Comments
Modulus of Elasticity	8.00 - 9.00 GPa	1160 - 1310 ksi	Average value: 8.56 GPa Grade Count:8
	7.00 - 9.00 GPa @Temperature 60.0 - 160 °C	1020 - 1310 ksi @Temperature 140 - 320 °F	Average value: 7.94 GPa Grade Count:2
Flexural Yield Strength	145 - 185 MPa	21000 - 26800 psi	Average value: 162 MPa Grade Count:7
Flexural Modulus	7.58 - 9.38 GPa	1100 - 1360 ksi	Average value: 8.04 GPa Grade Count:7
Shear Modulus	0.0250 - 0.950 GPa @Temperature 50.0 - 200 °C	3.63 - 138 ksi @Temperature 122 - 392 °F	Average value: 0.669 GPa Grade Count:1
Izod Impact, Notched	0.641 - 0.961 J/cm	1.20 - 1.80 ft-lb/in	Average value: 0.770 J/cm Grade Count:7
Izod Impact, Unnotched	3.74 - 5.87 J/cm	7.00 - 11.0 ft-lb/in	Average value: 4.60 J/cm Grade Count:6
Izod Impact, Notched (ISO)	7.00 - 7.00 kJ/m ² @Temperature -30.0 - -30.0 °C	3.33 - 3.33 ft-lb/in ² @Temperature -22.0 - -22.0 °F	Average value: 7.00 kJ/m ² Grade Count:1
Izod Impact, Unnotched (ISO)	36.0 - 50.0 kJ/m ² @Temperature -25.0 - 120 °C	17.1 - 23.8 ft-lb/in ² @Temperature -13.0 - 248 °F	Average value: 41.3 kJ/m ² Grade Count:1
Charpy Impact Unnotched	4.00 - 4.00 J/cm ² @Temperature -30.0 - -30.0 °C	19.0 - 19.0 ft-lb/in ² @Temperature -22.0 - -22.0 °F	Average value: 4.00 J/cm ² Grade Count:1
Charpy Impact, Notched	0.750 - 0.750 J/cm ² @Temperature -30.0 - -30.0 °C	3.57 - 3.57 ft-lb/in ² @Temperature -22.0 - -22.0 °F	Average value: 0.750 J/cm ² Grade Count:1

Thermal Properties	Metric	English	Comments
CTE, linear	25.0 - 25.0 µm/m-°C @Temperature 140 - 180 °C	13.9 - 13.9 µin/in-°F @Temperature 284 - 356 °F	Average value: 25.0 µm/m-°C Grade Count:1
Deflection Temperature at 0.46 MPa (66 psi)	187 - 190 °C	369 - 374 °F	Average value: 188 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	166 - 260 °C	331 - 500 °F	Average value: 196 °C Grade Count:9
Glass Transition Temp, Tg	187 - 265 °C	369 - 509 °F	Average value: 232 °C Grade Count:3

Flammability: UL 94 Thermal Properties	V-1 - 5VA Metric	V-1 - 5VA English	Grade Count:7 Comments
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Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+12 - 1.00e+16 ohm-cm	1.00e+12 - 1.00e+16 ohm-cm	Average value: 3.34e+15 ohm-cm Grade Count:3
Comparative Tracking Index	125 - 250 V	125 - 250 V	Average value: 161 V Grade Count:3

Processing Properties	Metric	English	Comments
Melt Temperature	271 - 410 °C	520 - 770 °F	Average value: 352 °C Grade Count:9
Mold Temperature	93.3 - 210 °C	200 - 410 °F	Average value: 153 °C Grade Count:8
Drying Temperature	110 - 170 °C	230 - 338 °F	Average value: 145 °C Grade Count:8
Moisture Content	0.150 %	0.150 %	Average value: 0.150 % Grade Count:4
Dew Point	-31.7 °C	-25.0 °F	Average value: -31.7 °C Grade Count:4
Injection Pressure	68.9 - 138 MPa	10000 - 20000 psi	Average value: 101 MPa Grade Count:5

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