

Overview of materials for Polypropylene, Stainless Fiber, EMI

Category : Polymer , Thermoplastic , Polypropylene (PP) , Polypropylene, Stainless Fiber, EMI

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polypropylene, Stainless Fiber, EMI". 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-Polypropylene-Stainless-Fiber-EMI.php

Physical Properties	Metric	English	Comments
Density	0.960 - 1.30 g/cc	0.0347 - 0.0470 lb/in ³	Average value: 1.05 g/cc Grade Count:13
Filler Content	5.00 - 15.0 %	5.00 - 15.0 %	Average value: 10.0 % Grade Count:4
Water Absorption	0.0100 - 0.0200 %	0.0100 - 0.0200 %	Average value: 0.0125 % Grade Count:4
Linear Mold Shrinkage	0.00300 - 0.0250 cm/cm	0.00300 - 0.0250 in/in	Average value: 0.00889 cm/cm Grade Count:11
Linear Mold Shrinkage, Transverse	0.0140 - 0.0250 cm/cm	0.0140 - 0.0250 in/in	Average value: 0.0209 cm/cm Grade Count:5

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	15.0 - 70.0 MPa	2180 - 10200 psi	Average value: 33.4 MPa Grade Count:13
Tensile Strength, Yield	19.0 - 21.4 MPa	2760 - 3100 psi	Average value: 20.5 MPa Grade Count:3
Elongation at Break	2.50 - 76.0 %	2.50 - 76.0 %	Average value: 23.5 % Grade Count:13
Elongation at Yield	5.20 - 8.00 %	5.20 - 8.00 %	Average value: 6.60 % Grade Count:4
Modulus of Elasticity	0.965 - 4.10 GPa	140 - 595 ksi	Average value: 2.04 GPa Grade Count:12
Flexural Yield Strength	27.6 - 109 MPa	4000 - 15800 psi	Average value: 48.5 MPa Grade Count:12
Flexural Modulus	1.10 - 6.20 GPa	160 - 899 ksi	Average value: 2.50 GPa Grade Count:12
Izod Impact, Notched	0.600 - 2.67 J/cm	1.12 - 5.00 ft-lb/in	Average value: 1.60 J/cm Grade Count:10
Izod Impact, Unnotched	3.20 - 5340 J/cm	5.99 - 10000 ft-lb/in	Average value: 8.36 J/cm Grade Count:10
Izod Impact, Notched (ISO)	10.0 - 25.0 kJ/m ²	4.76 - 11.9 ft-lb/in ²	Average value: 20.0 kJ/m ² Grade Count:3

Mechanical Properties	Metric	English	Comments
K (wear) Factor	18188 x 10 ⁻³ mm ³ /N-M	5000 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	Average value: 10100 x 10 ⁻³ mm ³ /N-M Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	54.0 - 140 µm/m-°C	30.0 - 77.8 µin/in-°F	Average value: 103 µm/m-°C Grade Count:4
CTE, linear, Transverse to Flow	120 - 170 µm/m-°C	66.7 - 94.4 µin/in-°F	Average value: 150 µm/m-°C Grade Count:3
Deflection Temperature at 0.46 MPa (66 psi)	95.0 - 138 °C	203 - 280 °F	Average value: 124 °C Grade Count:7
Deflection Temperature at 1.8 MPa (264 psi)	52.8 - 138 °C	127 - 280 °F	Average value: 86.8 °C Grade Count:9
Flammability, UL94	HB	HB	Grade Count:6

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0100 - 100 ohm-cm	0.0100 - 100 ohm-cm	Average value: 22.6 ohm-cm Grade Count:9
Surface Resistance	10.0 - 1.00e+6 ohm	10.0 - 1.00e+6 ohm	Average value: 169000 ohm Grade Count:9
Static Decay	2.00 sec	2.00 sec	Average value: 2.00 sec Grade Count:6

Processing Properties	Metric	English	Comments
Processing Temperature	188 - 227 °C	370 - 440 °F	Average value: 204 °C Grade Count:3
Melt Temperature	180 - 246 °C	356 - 475 °F	Average value: 219 °C Grade Count:7
Mold Temperature	20.0 - 65.6 °C	68.0 - 150 °F	Average value: 43.0 °C Grade Count:10
Drying Temperature	79.4 - 90.0 °C	175 - 194 °F	Average value: 81.4 °C Grade Count:7
Moisture Content	0.100 %	0.100 %	Average value: 0.100 % Grade Count:3
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:6

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