

Overview of materials for Polycarbonate, Aramid Fiber Reinforced

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Aramid Fiber Reinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polycarbonate, Aramid Fiber Reinforced". 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-Polycarbonate-Aramid-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.21 - 1.32 g/cc	0.0437 - 0.0477 lb/in ³	Average value: 1.27 g/cc Grade Count:8
Filler Content	10.0 - 15.0 %	10.0 - 15.0 %	Average value: 12.0 % Grade Count:5
Water Absorption	0.100 - 0.250 %	0.100 - 0.250 %	Average value: 0.157 % Grade Count:3
Linear Mold Shrinkage	0.00300 - 0.00700 cm/cm	0.00300 - 0.00700 in/in	Average value: 0.00490 cm/cm Grade Count:8

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	58.6 - 72.4 MPa	8500 - 10500 psi	Average value: 64.5 MPa Grade Count:8
Elongation at Break	4.00 - 10.0 %	4.00 - 10.0 %	Average value: 7.44 % Grade Count:8
Modulus of Elasticity	2.41 - 3.65 GPa	350 - 530 ksi	Average value: 3.17 GPa Grade Count:8
Flexural Yield Strength	89.6 - 110 MPa	13000 - 16000 psi	Average value: 98.7 MPa Grade Count:8
Flexural Modulus	2.76 - 3.45 GPa	400 - 500 ksi	Average value: 3.00 GPa Grade Count:8
Izod Impact, Notched	0.534 - 0.801 J/cm	1.00 - 1.50 ft-lb/in	Average value: 0.601 J/cm Grade Count:8
Izod Impact, Unnotched	4.81 - 10.7 J/cm	9.00 - 20.0 ft-lb/in	Average value: 7.47 J/cm Grade Count:8

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	138 - 143 °C	280 - 290 °F	Average value: 141 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	132 - 138 °C	270 - 280 °F	Average value: 135 °C Grade Count:8
Flammability, UL94	HB	HB	Grade Count:8

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 - 1.00e+16 ohm-cm	1.00e+14 - 1.00e+16 ohm-cm	Average value: 6.91e+15 ohm-cm Grade Count:8

Processing Properties	Metric	English	Comments
Processing Temperature	249 - 293 °C	480 - 560 °F	Average value: 271 °C Grade Count:3
Melt Temperature	288 - 316 °C	550 - 600 °F	Average value: 302 °C Grade Count:5
Mold Temperature	65.6 - 121 °C	150 - 250 °F	Average value: 93.3 °C Grade Count:8
Drying Temperature	121 °C	250 °F	Average value: 121 °C Grade Count:5
Moisture Content	0.0200 %	0.0200 %	Average value: 0.0200 % Grade Count:5
Dew Point	-28.9 °C	-20.0 °F	Average value: -28.9 °C Grade Count:5
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:8

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