

Overview of materials for Polycarbonate, Conductive

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Conductive

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.17 - 1.41 g/cc	0.0424 - 0.0509 lb/in ³	Average value: 1.26 g/cc Grade Count:22
Filler Content	2.00 - 16.0 %	2.00 - 16.0 %	Average value: 6.67 % Grade Count:3
Water Absorption	0.0800 - 0.900 %	0.0800 - 0.900 %	Average value: 0.196 % Grade Count:12
Linear Mold Shrinkage	0.00100 - 0.0120 cm/cm	0.00100 - 0.0120 in/in	Average value: 0.00503 cm/cm Grade Count:19
Melt Flow	0.900 - 16.9 g/10 min	0.900 - 16.9 g/10 min	Average value: 7.80 g/10 min Grade Count:3

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	99.0 - 122	99.0 - 122	Average value: 114 Grade Count:6
Tensile Strength, Ultimate	16.0 - 110 MPa	2320 - 16000 psi	Average value: 67.9 MPa Grade Count:16
Tensile Strength, Yield	64.8 - 146 MPa	9400 - 21200 psi	Average value: 94.6 MPa Grade Count:7
Elongation at Break	1.00 - 118 %	1.00 - 118 %	Average value: 11.0 % Grade Count:19
Modulus of Elasticity	2.07 - 15.9 GPa	300 - 2300 ksi	Average value: 4.16 GPa Grade Count:11
Flexural Yield Strength	84.1 - 179 MPa	12200 - 26000 psi	Average value: 120 MPa Grade Count:21
Flexural Modulus	2.41 - 14.5 GPa	350 - 2100 ksi	Average value: 4.72 GPa Grade Count:21
Izod Impact, Notched	0.270 - 1.60 J/cm	0.506 - 3.00 ft-lb/in	Average value: 0.813 J/cm Grade Count:19
Izod Impact, Unnotched	2.40 - 5340 J/cm	4.50 - 10000 ft-lb/in	Average value: 6.94 J/cm Grade Count:13

Thermal Properties	Metric	English	Comments
CTE, linear	19.8 - 57.6 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	11.0 - 32.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Average value: 35.6 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ Grade Count:5
Deflection Temperature at 0.46 MPa (66 psi)	132 - 196 $^{\circ}\text{C}$	270 - 385 $^{\circ}\text{F}$	Average value: 152 $^{\circ}\text{C}$ Grade Count:7
Deflection Temperature at 1.8 MPa (264 psi)	121 - 149 $^{\circ}\text{C}$	250 - 300 $^{\circ}\text{F}$	Average value: 136 $^{\circ}\text{C}$ Grade Count:14
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:9

Electrical Properties	Metric	English	Comments
Electrical Resistivity	10.0 - 2.00e+16 ohm-cm	10.0 - 2.00e+16 ohm-cm	Average value: 8.70e+14 ohm-cm Grade Count:19
Surface Resistance	100 - 1.00e+11 ohm	100 - 1.00e+11 ohm	Average value: 4.17e+9 ohm Grade Count:20
Static Decay	0.0500 - 2.00 sec	0.0500 - 2.00 sec	Average value: 1.33 sec Grade Count:8

Processing Properties	Metric	English	Comments
Processing Temperature	300 $^{\circ}\text{C}$	572 $^{\circ}\text{F}$	Average value: 300 $^{\circ}\text{C}$ Grade Count:3
Melt Temperature	274 - 327 $^{\circ}\text{C}$	525 - 621 $^{\circ}\text{F}$	Average value: 301 $^{\circ}\text{C}$ Grade Count:8
Mold Temperature	65.6 - 121 $^{\circ}\text{C}$	150 - 250 $^{\circ}\text{F}$	Average value: 106 $^{\circ}\text{C}$ Grade Count:10
Drying Temperature	121 - 121 $^{\circ}\text{C}$	250 - 250 $^{\circ}\text{F}$	Average value: 121 $^{\circ}\text{C}$ Grade Count:8
Moisture Content	0.0200 %	0.0200 %	Average value: 0.0200 % Grade Count:7
Dew Point	-28.9 $^{\circ}\text{C}$	-20.0 $^{\circ}\text{F}$	Average value: -28.9 $^{\circ}\text{C}$ Grade Count:7
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:7

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