

Overview of materials for Polycyclohexylenedimethylene Terephthalate (PCT), 20% Glass Reinforced

Category : Polymer , Thermoplastic , Polyester, TP , Polycyclohexylenedimethylene Terephthalate (PCT) , Polycyclohexylenedimethylene Terephthalate (PCT), 20% Glass Reinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "PCT or PCTA, 20% Glass 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-Polycyclohexylenedimethylene-Terephthalate-PCT-20-Glass-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.14 - 1.58 g/cc	0.0412 - 0.0571 lb/in ³	Average value: 1.42 g/cc Grade Count:7
Filler Content	20.0 %	20.0 %	Average value: 20.0 % Grade Count:4
Linear Mold Shrinkage	0.00300 - 0.00600 cm/cm	0.00300 - 0.00600 in/in	Average value: 0.00433 cm/cm Grade Count:3

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	62.0 - 100 MPa	8990 - 14500 psi	Average value: 93.8 MPa Grade Count:7
Elongation at Break	1.80 - 3.30 %	1.80 - 3.30 %	Average value: 2.34 % Grade Count:7
Modulus of Elasticity	5.50 - 8.00 GPa	798 - 1160 ksi	Average value: 7.05 GPa Grade Count:6
Flexural Yield Strength	97.0 - 155 MPa	14100 - 22500 psi	Average value: 142 MPa Grade Count:7
Flexural Modulus	4.00 - 7.40 GPa	580 - 1070 ksi	Average value: 5.96 GPa Grade Count:7
Izod Impact, Notched	0.320 - 1.10 J/cm	0.600 - 2.06 ft-lb/in	Average value: 0.618 J/cm Grade Count:4
	0.32034 - 1.00 J/cm @Temperature -40.0 - - 40.0 °C	0.60013 - 1.87 ft-lb/in @Temperature -40.0 - - 40.0 °F	Average value: 0.660 J/cm Grade Count:2
Izod Impact, Unnotched	2.56 - 430 J/cm	4.80 - 806 ft-lb/in	Average value: 112 J/cm Grade Count:4
	2.1356 - 2.1356 J/cm @Temperature -40.0 - - 40.0 °C	4.0009 - 4.0009 ft-lb/in @Temperature -40.0 - - 40.0 °F	Average value: 2.14 J/cm Grade Count:1

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	3.00 - 5.00 J/cm ²	14.3 - 23.8 ft-lb/in ²	Average value: 3.50 J/cm ² Grade Count:6
	3.00 - 3.00 J/cm ² @Temperature -30.0 - -30.0 °C	14.3 - 14.3 ft-lb/in ² @Temperature -22.0 - -22.0 °F	Average value: 3.00 J/cm ² Grade Count:1
Charpy Impact, Notched	0.500 - 0.850 J/cm ²	2.38 - 4.05 ft-lb/in ²	Average value: 0.608 J/cm ² Grade Count:6
	0.700 - 0.700 J/cm ² @Temperature -30.0 - -30.0 °C	3.33 - 3.33 ft-lb/in ² @Temperature -22.0 - -22.0 °F	Average value: 0.700 J/cm ² Grade Count:1

Thermal Properties	Metric	English	Comments
Melting Point	283 - 285 °C	541 - 545 °F	Average value: 284 °C Grade Count:6
Deflection Temperature at 0.46 MPa (66 psi)	259 - 272 °C	498 - 522 °F	Average value: 265 °C Grade Count:3
Deflection Temperature at 1.8 MPa (264 psi)	194 - 256 °C	381 - 493 °F	Average value: 232 °C Grade Count:7
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:5

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	Average value: 1.00e+15 ohm-cm Grade Count:3
Surface Resistance	1.00e+15 - 1.00e+17 ohm	1.00e+15 - 1.00e+17 ohm	Average value: 3.70e+16 ohm Grade Count:3
Dielectric Strength	19.7 - 41.0 kV/mm	500 - 1040 kV/in	Average value: 27.1 kV/mm Grade Count:3

Processing Properties	Metric	English	Comments
Melt Temperature	295 - 310 °C	563 - 590 °F	Average value: 302 °C Grade Count:7
Mold Temperature	80.0 - 175 °C	176 - 347 °F	Average value: 121 °C Grade Count:5
Drying Temperature	95.0 - 150 °C	203 - 302 °F	Average value: 106 °C Grade Count:7
Moisture Content	0.0300 %	0.0300 %	Average value: 0.0300 % Grade Count:6

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