

Overview of materials for Polybutylene Terephthalate (PBT), Carbon Black Filled

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), Carbon Black Filled

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polybutylene Terephthalate (PBT), Carbon Black Filled". 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-Polybutylene-Terephthalate-PBT-Carbon-Black-Filled.php

Physical Properties	Metric	English	Comments
Density	1.33 - 1.67 g/cc	0.0480 - 0.0603 lb/in ³	Average value: 1.45 g/cc Grade Count:16
Linear Mold Shrinkage	0.000500 - 0.00910 cm/cm	0.000500 - 0.00910 in/in	Average value: 0.00366 cm/cm Grade Count:9
Linear Mold Shrinkage, Transverse	0.00800 - 0.0110 cm/cm	0.00800 - 0.0110 in/in	Average value: 0.00958 cm/cm Grade Count:3

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	40.0 - 175 MPa	5800 - 25400 psi	Average value: 105 MPa Grade Count:16
Tensile Strength, Yield	49.0 - 142 MPa	7110 - 20600 psi	Average value: 104 MPa Grade Count:6
Elongation at Break	1.00 - 7.00 %	1.00 - 7.00 %	Average value: 3.03 % Grade Count:16
Modulus of Elasticity	2.28 - 22.4 GPa	331 - 3250 ksi	Average value: 10.4 GPa Grade Count:10
Flexural Yield Strength	68.0 - 269 MPa	9860 - 39000 psi	Average value: 157 MPa Grade Count:16
Flexural Modulus	2.06 - 22.9 GPa	299 - 3320 ksi	Average value: 11.9 GPa Grade Count:16
Izod Impact, Notched	0.214 - 0.740 J/cm	0.401 - 1.39 ft-lb/in	Average value: 0.462 J/cm Grade Count:12
Izod Impact, Unnotched	0.907 - 6.41 J/cm	1.70 - 12.0 ft-lb/in	Average value: 4.10 J/cm Grade Count:12
Falling Dart Impact	4.34 - 7.57 J	3.20 - 5.58 ft-lb	Average value: 5.62 J Grade Count:7

Thermal Properties	Metric	English	Comments
Thermal Conductivity	1.10 - 1.20 W/m-K	7.63 - 8.33 BTU-in/hr-ft ² -°F	Average value: 1.13 W/m-K Grade Count:3

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (0.07 psi)	213 - 221 °C	415 - 430 °F	Average value: 218 °C Grade Count:5
Deflection Temperature at 1.8 MPa (264 psi)	81.0 - 216 °C	178 - 421 °F	Average value: 191 °C Grade Count:13
Flammability, UL94	HB	HB	Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.500 ohm-cm - 1e+05	0.500 ohm-cm - 1e+05	Average value: 1780 ohm-cm Grade Count:11
Surface Resistance	100 - 1.00e+10 ohm	100 - 1.00e+10 ohm	Average value: 5.56e+8 ohm Grade Count:13
Static Decay	0.0100 - 2.00 sec	0.0100 - 2.00 sec	Average value: 1.00 sec Grade Count:4

Processing Properties	Metric	English	Comments
Nozzle Temperature	243 - 282 °C	469 - 540 °F	Average value: 256 °C Grade Count:6
Melt Temperature	238 - 282 °C	460 - 540 °F	Average value: 256 °C Grade Count:15
Mold Temperature	37.8 - 107 °C	100 - 225 °F	Average value: 81.7 °C Grade Count:15
Drying Temperature	121 - 135 °C	250 - 275 °F	Average value: 122 °C Grade Count:15
Moisture Content	0.0200 - 0.150 %	0.0200 - 0.150 %	Average value: 0.0500 % Grade Count:15
Dew Point	-28.9 °C	-20.0 °F	Average value: -28.9 °C Grade Count:6
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 86.2 MPa Grade Count:6
Vent Depth	0.00250 - 0.00380 cm	0.000984 - 0.00150 in	Average value: 0.00315 cm Grade Count:6

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