

Overview of materials for Polybutylene Terephthalate (PBT), PTFE Filled

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

Material Notes:

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

Physical Properties	Metric	English	Comments
Density	1.33 - 1.65 g/cc	0.0480 - 0.0596 lb/in ³	Average value: 1.42 g/cc Grade Count:31
Filler Content	10.0 - 20.0 %	10.0 - 20.0 %	Average value: 14.1 % Grade Count:8
Water Absorption	0.0500 - 0.150 %	0.0500 - 0.150 %	Average value: 0.0867 % Grade Count:15
Additive Loading	5.00 - 10.0 %	5.00 - 10.0 %	Average value: 6.67 % Grade Count:3
Linear Mold Shrinkage	0.000700 - 0.0250 cm/cm	0.000700 - 0.0250 in/in	Average value: 0.0183 cm/cm Grade Count:29
Melt Flow	16.5 - 23.8 g/10 min	16.5 - 23.8 g/10 min	Average value: 20.5 g/10 min Grade Count:5

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	33.0 - 100 MPa	4790 - 14500 psi	Average value: 47.4 MPa Grade Count:29
Tensile Strength, Yield	43.0 - 53.1 MPa	6240 - 7700 psi	Average value: 47.9 MPa Grade Count:3
Elongation at Break	3.00 - 12.0 %	3.00 - 12.0 %	Average value: 8.85 % Grade Count:19
Elongation at Yield	2.80 - 12.0 %	2.80 - 12.0 %	Average value: 5.13 % Grade Count:10
Modulus of Elasticity	2.00 - 6.00 GPa	290 - 870 ksi	Average value: 2.67 GPa Grade Count:26
Flexural Yield Strength	50.0 - 100 MPa	7250 - 14500 psi	Average value: 73.8 MPa Grade Count:25
Flexural Modulus	1.70 - 4.00 GPa	247 - 580 ksi	Average value: 2.37 GPa Grade Count:28
Izod Impact, Notched	0.320 - 0.694 J/cm	0.600 - 1.30 ft-lb/in	Average value: 0.495 J/cm Grade Count:18
Izod Impact, Unnotched	3.47 - 8.54 J/cm	6.50 - 16.0 ft-lb/in	Average value: 5.84 J/cm Grade Count:14

Mechanical Properties	Metric	English	Comments
	7.00 kJ/m ²	1.33 ft-lb/in ²	Average value: 4.65 kJ/m ² Grade Count:4
	6.00 - 6.00 kJ/m ² @Temperature -30.0 - -30.0 °C	2.86 - 2.86 ft-lb/in ² @Temperature -22.0 - -22.0 °F	Average value: 6.00 kJ/m ² Grade Count:1
Charpy Impact Unnotched	1.90 - 3.50 J/cm ²	9.04 - 16.7 ft-lb/in ²	Average value: 2.54 J/cm ² Grade Count:9
Charpy Impact, Notched	0.150 - 0.500 J/cm ²	0.714 - 2.38 ft-lb/in ²	Average value: 0.317 J/cm ² Grade Count:3
Coefficient of Friction	0.120 - 0.390	0.120 - 0.390	Average value: 0.188 Grade Count:8
Coefficient of Friction, Static	0.0800 - 0.210	0.0800 - 0.210	Average value: 0.129 Grade Count:8

Thermal Properties	Metric	English	Comments
CTE, linear	32.4 - 109 µm/m-°C	18.0 - 60.6 µin/in-°F	Average value: 76.5 µm/m-°C Grade Count:3
Maximum Service Temperature, Air	130 - 150 °C	266 - 302 °F	Average value: 140 °C Grade Count:8
Deflection Temperature at 0.46 MPa (66 psi)	143 - 215 °C	290 - 419 °F	Average value: 166 °C Grade Count:4
Deflection Temperature at 1.8 MPa (264 psi)	54.4 - 190 °C	130 - 374 °F	Average value: 68.7 °C Grade Count:21
Vicat Softening Point	165 - 210 °C	329 - 410 °F	Average value: 183 °C Grade Count:5
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:18

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 - 3.00e+16 ohm-cm	1.00e+14 - 3.00e+16 ohm-cm	Average value: 1.00e+16 ohm-cm Grade Count:10
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	Average value: 1.00e+14 ohm Grade Count:3
Insulation Resistance	1.00e+12 ohm	1.00e+12 ohm	Average value: 1.00e+12 ohm Grade Count:8

Processing Properties	Metric	English	Comments
Processing Temperature	232 - 270 °C	450 - 518 °F	Average value: 250 °C Grade Count:11
Nozzle Temperature	250 - 265 °C	482 - 509 °F	Average value: 258 °C Grade Count:8
Melt Temperature	230 - 280 °C	446 - 536 °F	Average value: 257 °C Grade Count:26
Mold Temperature	49.0 - 120 °C	120 - 248 °F	Average value: 88.1 °C Grade Count:29

Drying Temperature Processing Properties	80.0 - 121 °C Metric	176 - 250 °F English	Average value: 108 °C Grade Count:27 Comments
Moisture Content	0.0300 - 0.150 %	0.0300 - 0.150 %	Average value: 0.0447 % Grade Count:15
Dew Point	-28.9 °C	-20.0 °F	Average value: -28.9 °C Grade Count:12
Injection Pressure	4.96 - 103 MPa	720 - 15000 psi	Average value: 75.9 MPa Grade Count:14

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