

## Overview of materials for Polybutylene Terephthalate (PBT), Glass Filled, Impact Modified

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), Glass Filled, Impact Modified

### Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polybutylene Terephthalate (PBT), Glass Filled, Impact Modified". 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-Glass-Filled-Impact-Modified.php](http://www.lookpolymers.com/polymer_Overview-of-materials-for-Polybutylene-Terephthalate-PBT-Glass-Filled-Impact-Modified.php)

Physical Properties	Metric	English	Comments
Density	1.22 - 1.76 g/cc	0.0439 - 0.0636 lb/in <sup>3</sup>	Average value: 1.49 g/cc Grade Count:43
Filler Content	10.0 - 40.0 %	10.0 - 40.0 %	Average value: 23.8 % Grade Count:8
Water Absorption	0.0600 - 0.100 %	0.0600 - 0.100 %	Average value: 0.0733 % Grade Count:9
Moisture Absorption at Equilibrium	0.100 - 0.200 %	0.100 - 0.200 %	Average value: 0.157 % Grade Count:7
Linear Mold Shrinkage	0.000 - 0.0400 cm/cm	0.000 - 0.0400 in/in	Average value: 0.00583 cm/cm Grade Count:27
Linear Mold Shrinkage, Transverse	0.00500 - 0.0220 cm/cm	0.00500 - 0.0220 in/in	Average value: 0.00916 cm/cm Grade Count:9
Melt Flow	5.00 - 23.0 g/10 min	5.00 - 23.0 g/10 min	Average value: 12.0 g/10 min Grade Count:6

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	115 - 119	115 - 119	Average value: 117 Grade Count:10
Tensile Strength, Ultimate	29.0 - 153 MPa	4210 - 22200 psi	Average value: 101 MPa Grade Count:42
Tensile Strength, Yield	26.0 - 141 MPa	3770 - 20500 psi	Average value: 71.0 MPa Grade Count:5
Elongation at Break	1.10 - 247 %	1.10 - 247 %	Average value: 15.6 % Grade Count:40
Modulus of Elasticity	1.76 - 10.7 GPa	256 - 1550 ksi	Average value: 6.74 GPa Grade Count:18
Flexural Yield Strength	47.0 - 210 MPa	6820 - 30500 psi	Average value: 153 MPa Grade Count:43
Flexural Modulus	1.67 - 82.7 GPa	243 - 12000 ksi	Average value: 8.92 GPa Grade Count:42

Mechanical Properties	Metric	English	Comments
	52.9 J/cm	3.61 ft-lb/in	Average value: 3.61 J/cm Grade Count:21
	1.6017 - 1.6017 J/cm @Temperature -28.9 - - 28.9 °C	3.0006 - 3.0006 ft-lb/in @Temperature -20.0 - - 20.0 °F	Average value: 1.60 J/cm Grade Count:1
Izod Impact, Unnotched	5.34 - 10.7 J/cm	10.0 - 20.0 ft-lb/in	Average value: 7.48 J/cm Grade Count:12
Izod Impact, Notched (ISO)	5.00 kJ/m <sup>2</sup> - NB	2.38 ft-lb/in <sup>2</sup> - NB	Average value: 8.81 kJ/m <sup>2</sup> Grade Count:10
	<= 10.0 kJ/m <sup>2</sup> @Temperature -40.0 - - 30.0 °C	<= 4.76 ft-lb/in <sup>2</sup> @Temperature -40.0 - - 22.0 °F	Average value: 10.0 kJ/m <sup>2</sup> Grade Count:1
Izod Impact, Unnotched (ISO)	17.0 - 55.0 kJ/m <sup>2</sup>	8.09 - 26.2 ft-lb/in <sup>2</sup>	Average value: 37.3 kJ/m <sup>2</sup> Grade Count:3
Charpy Impact Unnotched	2.20 - 1000 J/cm <sup>2</sup>	10.5 - 4760 ft-lb/in <sup>2</sup>	Average value: 4.15 J/cm <sup>2</sup> Grade Count:7
	2.20 - 999.9 J/cm <sup>2</sup> @Temperature -30.0 - 30.0 °C	10.5 - 4759 ft-lb/in <sup>2</sup> @Temperature -22.0 - 86.0 °F	Average value: 3.22 J/cm <sup>2</sup> Grade Count:6
Charpy Impact, Notched	0.390 - 8.00 J/cm <sup>2</sup>	1.86 - 38.1 ft-lb/in <sup>2</sup>	Average value: 0.991 J/cm <sup>2</sup> Grade Count:23
	0.400 - 1.90 J/cm <sup>2</sup> @Temperature -30.0 - 30.0 °C	1.90 - 9.04 ft-lb/in <sup>2</sup> @Temperature -22.0 - 86.0 °F	Average value: 0.870 J/cm <sup>2</sup> Grade Count:7

Thermal Properties	Metric	English	Comments
CTE, linear	16.2 - 130 µm/m-°C	9.00 - 72.2 µin/in-°F	Average value: 35.9 µm/m-°C Grade Count:17
CTE, linear, Transverse to Flow	35.0 - 116 µm/m-°C	19.4 - 64.4 µin/in-°F	Average value: 79.2 µm/m-°C Grade Count:14
Melting Point	210 - 225 °C	410 - 437 °F	Average value: 223 °C Grade Count:12
Deflection Temperature at 0.46 MPa (66 psi)	86.0 - 228 °C	187 - 442 °F	Average value: 200 °C Grade Count:24
Deflection Temperature at 1.8 MPa (264 psi)	48.9 - 211 °C	120 - 412 °F	Average value: 177 °C Grade Count:41
Vicat Softening Point	128 - 220 °C	262 - 428 °F	Average value: 183 °C Grade Count:3
Glass Transition Temp, Tg	20.0 - 71.0 °C	68.0 - 160 °F	Average value: 54.2 °C Grade Count:5
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:35

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+7 - 1.20e+17 ohm-cm	1.00e+7 - 1.20e+17 ohm-cm	Average value: 1.80e+16 ohm-cm Grade Count:26
Surface Resistance	2.00e+10 - 4.00e+17 ohm	2.00e+10 - 4.00e+17 ohm	Average value: 7.27e+16 ohm Grade Count:15
Dielectric Constant	2.80 - 4.30	2.80 - 4.30	Average value: 3.60 Grade Count:9
Dielectric Strength	16.5 - 32.0 kV/mm	420 - 813 kV/in	Average value: 23.2 kV/mm Grade Count:17
Dissipation Factor	0.000 - 0.0240	0.000 - 0.0240	Average value: 0.0149 Grade Count:9
Arc Resistance	87.0 - 129 sec	87.0 - 129 sec	Average value: 107 sec Grade Count:4
Comparative Tracking Index	175 - 600 V	175 - 600 V	Average value: 304 V Grade Count:12

Processing Properties	Metric	English	Comments
Processing Temperature	20.0 - 260 °C	68.0 - 500 °F	Average value: 166 °C Grade Count:20
Die Temperature	240 - 260 °C	464 - 500 °F	Average value: 254 °C Grade Count:9
Melt Temperature	20.0 - 270 °C	68.0 - 518 °F	Average value: 231 °C Grade Count:15
Mold Temperature	30.0 - 107 °C	86.0 - 225 °F	Average value: 84.3 °C Grade Count:16
Drying Temperature	116 - 130 °C	240 - 266 °F	Average value: 123 °C Grade Count:8
Moisture Content	0.000 - 0.0200 %	0.000 - 0.0200 %	Average value: 0.0180 % Grade Count:5
Injection Pressure	68.9 - 103 MPa	10000 - 15000 psi	Average value: 84.4 MPa Grade Count:9
Hot-Working Temperature	250 - 260 °C	482 - 500 °F	Average value: 255 °C Grade Count:4

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