

Overview of materials for PET + PBT Unreinforced

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , PET + PBT Unreinforced , Polyethylene Terephthalate (PET)

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "PET + PBT Unreinforced". 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-PET-PBT-Unreinforced.php

Physical Properties	Metric	English	Comments
Density	1.22 - 1.66 g/cc	0.0441 - 0.0600 lb/in ³	Average value: 1.51 g/cc Grade Count:11
Water Absorption	0.0500 %	0.0500 %	Average value: 0.0500 % Grade Count:3
Moisture Absorption at Equilibrium	0.0300 - 0.420 %	0.0300 - 0.420 %	Average value: 0.150 % Grade Count:6
Water Absorption at Saturation	0.0700 - 0.420 %	0.0700 - 0.420 %	Average value: 0.138 % Grade Count:6
Linear Mold Shrinkage	0.00300 - 0.0157 cm/cm	0.00300 - 0.0157 in/in	Average value: 0.00849 cm/cm Grade Count:10
Linear Mold Shrinkage, Transverse	0.0114 - 0.0130 cm/cm	0.0114 - 0.0130 in/in	Average value: 0.0122 cm/cm Grade Count:4
Melt Flow	14.0 - 64.0 g/10 min	14.0 - 64.0 g/10 min	Average value: 39.7 g/10 min Grade Count:8

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	90.0 - 95.0	90.0 - 95.0	Average value: 91.7 Grade Count:3
Hardness, Rockwell R	120	120	Average value: 120 Grade Count:3
Tensile Strength, Ultimate	45.0 - 115 MPa	6530 - 16700 psi	Average value: 71.4 MPa Grade Count:11
Tensile Strength, Yield	45.0 - 115 MPa	6530 - 16700 psi	Average value: 76.5 MPa Grade Count:6
Elongation at Break	1.50 - 118 %	1.50 - 118 %	Average value: 12.7 % Grade Count:11
Elongation at Yield	1.50 - 5.00 %	1.50 - 5.00 %	Average value: 2.26 % Grade Count:6
Modulus of Elasticity	2.28 - 15.0 GPa	331 - 2180 ksi	Average value: 9.02 GPa Grade Count:8
Flexural Yield Strength	81.0 - 195 MPa	11700 - 28300 psi	Average value: 124 MPa Grade Count:11

Mechanical Properties	Metric	English	Comments
	7.02 - 12.2 GPa	215 - 1770 ksi	Average value: 7.02 GPa Grade Count:11
Compressive Yield Strength	54.0 - 93.0 MPa	7830 - 13500 psi	Average value: 68.7 MPa Grade Count:3
Izod Impact, Notched	0.270 - 8.17 J/cm	0.506 - 15.3 ft-lb/in	Average value: 1.31 J/cm Grade Count:11
	0.300 - 2.47 J/cm @Temperature -30.0 - - 30.0 °C	0.562 - 4.63 ft-lb/in @Temperature -22.0 - - 22.0 °F	Average value: 0.817 J/cm Grade Count:7
Izod Impact, Unnotched	7.00 J/cm	13.1 ft-lb/in	Average value: 7.00 J/cm Grade Count:3
Izod Impact, Notched (ISO)	2.00 - 62.0 kJ/m²	0.952 - 29.5 ft-lb/in²	Average value: 11.4 kJ/m² Grade Count:8
	2.00 - 18.0 kJ/m² @Temperature -30.0 - - 30.0 °C	0.952 - 8.57 ft-lb/in² @Temperature -22.0 - - 22.0 °F	Average value: 6.43 kJ/m² Grade Count:7
Charpy Impact, Notched	0.100 - 1.80 J/cm²	0.476 - 8.57 ft-lb/in²	Average value: 0.967 J/cm² Grade Count:6
Dart Drop, Total Energy	4.00 - 55.0 J	2.95 - 40.6 ft-lb	Average value: 12.6 J Grade Count:7
Taber Abrasion, mg/1000 Cycles	15.0 - 28.0	15.0 - 28.0	Average value: 20.3 Grade Count:3

Thermal Properties	Metric	English	Comments
CTE, linear	17.0 - 70.4 µm/m-°C	9.44 - 39.1 µin/in-°F	Average value: 38.7 µm/m-°C Grade Count:7
CTE, linear, Transverse to Flow	59.4 - 71.6 µm/m-°C	33.0 - 39.8 µin/in-°F	Average value: 66.0 µm/m-°C Grade Count:7
Melting Point	255 °C	491 °F	Average value: 255 °C Grade Count:3
Deflection Temperature at 0.46 MPa (66 psi)	124 - 220 °C	255 - 428 °F	Average value: 197 °C Grade Count:10
Deflection Temperature at 1.8 MPa (264 psi)	70.0 - 200 °C	158 - 392 °F	Average value: 134 °C Grade Count:11
Vicat Softening Point	130 - 195 °C	266 - 383 °F	Average value: 178 °C Grade Count:8
Flammability, UL94	HB - V-0	HB - V-0	Grade Count:3

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	Average value: 1.00e+16 ohm-cm Grade Count:3
Dielectric Strength	24.0 - 25.0 kV/mm	610 - 635 kV/in	Average value: 24.3 kV/mm Grade Count:3

Arc Resistance Electrical Properties	80.0 - 130 sec Metric	80.0 - 130 sec English	Average value: 112 sec Grade Count:3 Comments
Comparative Tracking Index	210 - 255 V	210 - 255 V	Average value: 238 V Grade Count:3

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