

Overview of materials for Polyethylene Terephthalate (PET), 40% Glass Reinforced

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), 40% Glass Reinforced

Material Notes:

This property data is a summary of similar materials in the MatWeb database for the category "Polyethylene Terephthalate (PET), 40% Glass Reinforced". Specific grades with glass content between 35% and 44% are included. 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-Polyethylene-Terephthalate-PET-40-Glass-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.48 - 1.79 g/cc	0.0535 - 0.0647 lb/in ³	Average value: 1.64 g/cc Grade Count:22
	1.32 - 1.32 g/cc @Temperature 285 - 285 °C	0.0477 - 0.0477 lb/in ³ @Temperature 545 - 545 °F	Average value: 1.32 g/cc Grade Count:1
Filler Content	35.0 - 43.0 %	35.0 - 43.0 %	Average value: 39.5 % Grade Count:4
Water Absorption	0.0400 - 0.830 %	0.0400 - 0.830 %	Average value: 0.373 % Grade Count:14
Moisture Absorption at Equilibrium	0.130 - 0.240 %	0.130 - 0.240 %	Average value: 0.178 % Grade Count:10
Viscosity	12500 - 250000 cP @Temperature 270 - 310 °C	12500 - 250000 cP @Temperature 518 - 590 °F	Average value: 96700 cP Grade Count:1
	12500 - 250000 cP @Shear Rate 100 - 100000 1/s	12500 - 250000 cP @Shear Rate 100 - 100000 1/s	Average value: 96700 cP Grade Count:1
Linear Mold Shrinkage	0.000500 - 0.00650 cm/cm	0.000500 - 0.00650 in/in	Average value: 0.00282 cm/cm Grade Count:15
Linear Mold Shrinkage, Transverse	0.00500 - 0.0105 cm/cm	0.00500 - 0.0105 in/in	Average value: 0.00819 cm/cm Grade Count:12
Melt Flow	6.00 - 20.0 g/10 min	6.00 - 20.0 g/10 min	Average value: 12.1 g/10 min Grade Count:4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	115 - 122	115 - 122	Average value: 119 Grade Count:4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	55.2 - 210 MPa	8010 - 30500 psi	Average value: 144 MPa Grade Count:1
	@Temperature -40.0 - 150 °C	@Temperature -40.0 - 302 °F	
	22.4 - 200 MPa	3250 - 29000 psi	Average value: 87.1 MPa Grade Count:1
	@Temperature -40.0 - 150 °C	@Temperature -40.0 - 302 °F	
	22.4 - 200 MPa	3250 - 29000 psi	Average value: 87.1 MPa Grade Count:1
	@Strain 0.140 - 4.69 %	@Strain 0.140 - 4.69 %	
Elongation at Break	1.00 - 3.60 %	1.00 - 3.60 %	Average value: 2.22 % Grade Count:19
	1.70 - 5.50 %	1.70 - 5.50 %	Average value: 3.83 % Grade Count:1
	@Temperature -40.0 - 150 °C	@Temperature -40.0 - 302 °F	
	6.90 - 17.0 GPa	1000 - 2470 ksi	Average value: 12.9 GPa Grade Count:18
Modulus of Elasticity	2.193 - 17.1 GPa	318.1 - 2480 ksi	Average value: 8.31 GPa Grade Count:2
	@Temperature -40.0 - 150 °C	@Temperature -40.0 - 302 °F	
Flexural Yield Strength	132 - 269 MPa	19100 - 39000 psi	Average value: 209 MPa Grade Count:8
	79.3 - 310 MPa	11500 - 45000 psi	Average value: 176 MPa Grade Count:1
	@Temperature -40.0 - 150 °C	@Temperature -40.0 - 302 °F	
	7.52 - 14.5 GPa	1090 - 2100 ksi	Average value: 10.7 GPa Grade Count:10
Flexural Modulus	2.90 - 15.2 GPa	421 - 2200 ksi	Average value: 8.35 GPa Grade Count:1
	@Temperature -40.0 - 150 °C	@Temperature -40.0 - 302 °F	
Compressive Yield Strength	172 - 231 MPa	25000 - 33500 psi	Average value: 192 MPa Grade Count:3
	>= 0.0920 GPa	>= 13.3 ksi	Average value: 1.64 GPa Grade Count:2
Shear Modulus	@Temperature -50.0 - 250 °C	@Temperature -58.0 - 482 °F	
	0.801 - 1.28 J/cm	1.50 - 2.40 ft-lb/in	Average value: 0.949 J/cm Grade Count:7
Izod Impact, Notched	0.910 - 0.910 J/cm	1.70 - 1.70 ft-lb/in	Average value: 0.910 J/cm Grade Count:1
	@Temperature -40.0 - -40.0 °C	@Temperature -40.0 - -40.0 °F	

Mechanical Properties	Metric	English	Comments
Wood Impact, Unnotched	8.41 - 8.54 J/cm	12.0 - 16.0 ft-lb/in	Average value: 7.35 J/cm Grade Count:4
	5.10 - 5.10 J/cm @Temperature -40.0 - - 40.0 °C	9.55 - 9.55 ft-lb/in @Temperature -40.0 - - 40.0 °F	Average value: 5.10 J/cm Grade Count:1
Charpy Impact Unnotched	2.10 - 6.50 J/cm ²	9.99 - 30.9 ft-lb/in ²	Average value: 4.59 J/cm ² Grade Count:15
	2.00 - 6.00 J/cm ² @Temperature -40.0 - - 30.0 °C	9.52 - 28.6 ft-lb/in ² @Temperature -40.0 - - 22.0 °F	Average value: 4.35 J/cm ² Grade Count:9
Charpy Impact, Notched	0.340 - 1.20 J/cm ²	1.62 - 5.71 ft-lb/in ²	Average value: 0.851 J/cm ² Grade Count:14
	0.400 - 1.20 J/cm ² @Temperature -40.0 - - 30.0 °C	1.90 - 5.71 ft-lb/in ² @Temperature -40.0 - - 22.0 °F	Average value: 0.850 J/cm ² Grade Count:9

Thermal Properties	Metric	English	Comments
CTE, linear	16.0 - 500 µm/m-°C	8.89 - 278 µin/in-°F	Average value: 183 µm/m-°C Grade Count:12
	500 - 500 µm/m-°C @Temperature 55.0 - 160 °C	278 - 278 µin/in-°F @Temperature 131 - 320 °F	Average value: 500 µm/m-°C Grade Count:1
CTE, linear, Transverse to Flow	40.0 - 85.0 µm/m-°C	22.2 - 47.2 µin/in-°F	Average value: 61.8 µm/m-°C Grade Count:10
	96.0 - 96.0 µm/m-°C @Temperature 55.0 - 160 °C	53.3 - 53.3 µin/in-°F @Temperature 131 - 320 °F	Average value: 96.0 µm/m-°C Grade Count:1
Thermal Conductivity	0.303 - 1.65 W/m-K	2.10 - 11.5 BTU-in/hr- ft ² -°F	Average value: 0.675 W/m-K Grade Count:4
Melting Point	246 - 255 °C	475 - 491 °F	Average value: 252 °C Grade Count:10
Deflection Temperature at 0.46 MPa (66 psi)	232 - 250 °C	450 - 482 °F	Average value: 245 °C Grade Count:13
Deflection Temperature at 1.8 MPa (264 psi)	200 - 248 °C	392 - 478 °F	Average value: 227 °C Grade Count:18
Flammability, UL94	HB - 5VA	HB - 5VA	Grade Count:16

Electrical Properties	Metric	English	Comments
Electrical Resistivity	3.00e+13 - 1.00e+16 ohm-cm	3.00e+13 - 1.00e+16 ohm-cm	Average value: 3.00e+15 ohm-cm Grade Count:12

Electrical Properties	1.00e+13 - 1.00e+15 Metric	1.00e+13 - 1.00e+15 English	Average value: 6.85e+14 ohm Grade Count:9
Dielectric Constant	3.10 - 125	3.10 - 125	Average value: 14.7 Grade Count:11
Dielectric Strength	1.10 - 39.0 kV/mm	27.9 - 991 kV/in	Average value: 26.4 kV/mm Grade Count:12
	12.0 - 21.5 kV/mm @Temperature 95.0 - 150 °C	305 - 546 kV/in @Temperature 203 - 302 °F	Average value: 15.8 kV/mm Grade Count:1
	12.0 - 21.5 kV/mm @Thickness 1.60 - 3.20 mm	305 - 546 kV/in @Thickness 0.0630 - 0.126 in	Average value: 15.8 kV/mm Grade Count:1
Dissipation Factor	0.00300 - 0.0300	0.00300 - 0.0300	Average value: 0.0109 Grade Count:9
Comparative Tracking Index	250 - 400 V	250 - 400 V	Average value: 265 V Grade Count:8

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China