

Evonik Corporation Vestodur® GF 20 20% Glass Reinforced PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 20% Glass Fiber Filled

Material Notes:

Description: Degussa AG's High Performance Polymers Business Unit manufactures a range of polybutylene terephthalate compounds that are supplied under the registered trademark VESTODUR® . Material properties characterizing VESTODUR compounds are: high thermostability, high stiffness, low water absorption resulting in high dimensional stability, high hardness, good strength, good sliding friction behavior, low abrasion, good creep behavior, good electrical properties, good chemical resistance, good weathering resistance, good processability, no tendency to form stress cracks.

Specific Notes for this Material: Glass-bead filled and glass-fiber reinforced compounds with elevated or high rigidity, partially low-warpage; e.g., for housing parts in the automotive industry. Information provided by degussa.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Evonik-Corporation-Vestodur-GF-20-20-Glass-Reinforced-PBT.php

Physical Properties	Metric	English	Comments
Density	1.47 g/cc	0.0531 lb/in ³	ISO 1183
Water Absorption at Saturation	0.45 %	0.45 %	ISO 62
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	Pigmentation can change mold shrinkage.
Linear Mold Shrinkage, Transverse	0.015 cm/cm	0.015 in/in	Pigmentation can change mold shrinkage.
Melt Flow	23.52 g/10 min @Load 2.16 kg, Temperature 250 °C	23.52 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	82	82	ISO 868
Ball Indentation Hardness	190 MPa	27600 psi	H30; ISO 2039-1
Tensile Strength at Break	140 MPa	20300 psi	5 mm/min; ISO 527-1/2
Elongation at Break	3.5 %	3.5 %	5 mm/min; ISO 527-1/2
Tensile Modulus	7.20 GPa	1040 ksi	ISO 527-1/2
Charpy Impact Unnotched	6.00 J/cm ² @Temperature 23.0 °C	28.6 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
	6.50 J/cm ² @Temperature -30.0 °C	30.9 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.850 J/cm ²	4.05 ft-lb/in ²	ISO 179/1eA

Mechanical Properties	@Temperature -30.0 °C Metric	@Temperature -22.0 °F English	Comments
	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 µm/m-°C	33.3 µin/in-°F	Longitudinal; ISO 11359
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Melting Point	221 - 226 °C	430 - 439 °F	DSC
Deflection Temperature at 0.46 MPa (66 psi)	220 °C	428 °F	ISO 75-1/2
Deflection Temperature at 1.8 MPa (264 psi)	195 °C	383 °F	ISO 75-1/2
Vicat Softening Point	210 °C	410 °F	50N; ISO 306
	220 °C	428 °F	10N; ISO 306
Flammability, UL94	HB	HB	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	20 %	20 %	ISO 4589
Glow Wire Test	750 °C	1380 °F	IEC 60695-2-1/0-3
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	IEC 60093
Dielectric Constant	3.8	3.8	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	4.2	4.2	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength			K20/P50; IEC 60243-1

Electrical Properties	27.0 kV/mm Metric	686 kV/in English	Comments
Dissipation Factor	0.0030	0.0030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.018	0.018	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	275 V	275 V	Test Solution A, 100 drops; IEC 60112
	300 V	300 V	Test Solution A, CTI; IEC 60112

Descriptive Properties	Value	Comments
Electrolytic Corrosion	A1 Step	IEC 60426

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