

Evonik Corporation Vestodur® GK 20 20% Glass Bead Reinforced PBT

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

Material Notes:

Description: VESTODUR GK20 is a 20% glass beads-filled, semicrystalline thermoplastic polyester compound based on polybutylene terephthalate (PBT). The compound is suitable for injection molding mechanically and thermally highly stressed parts with good surface quality. Compared to unfilled PBT compounds VESTODUR GK20 shows a higher stiffness, a reduced, almost isotropic mold shrinkage, and thus a lower tendency to warp. Information provided by degussa.

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Density	1.40 g/cc	0.0506 lb/in ³	ISO 1183
Water Absorption at Saturation	0.45 %	0.45 %	ISO 62
Linear Mold Shrinkage	0.012 - 0.014 cm/cm @Thickness 4.00 mm	0.012 - 0.014 in/in @Thickness 0.157 in	sheets with film gate at rim, mold temperature 60°C
Linear Mold Shrinkage, Transverse	0.012 - 0.014 cm/cm	0.012 - 0.014 in/in	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	166 MPa	24100 psi	H30; ISO 2039-1
Tensile Strength, Yield	60.0 MPa	8700 psi	ISO 527-1/2
Elongation at Break	5.5 %	5.5 %	ISO 527-1/2
Elongation at Yield	4.0 %	4.0 %	ISO 527-1/2
Tensile Modulus	3.20 GPa	464 ksi	ISO 527-1/-2
Charpy Impact Unnotched	2.20 J/cm ² @Temperature -30.0 °C	10.5 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	2.50 J/cm ² @Temperature 23.0 °C	11.9 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.300 J/cm ² @Temperature -30.0 °C	1.43 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	0.300 J/cm ² @Temperature 23.0 °C	1.43 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear	100 µm/m-°C	55.6 µin/in-°F	Longitudinal; ISO 11359, DIN 53752
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	100 µm/m-°C	55.6 µin/in-°F	ISO 11359, DIN 53752
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Deflection Temperature at 0.46 MPa (66 psi)	190 °C	374 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	72.0 °C	162 °F	ISO 75-1/-2
Vicat Softening Point	193 °C	379 °F	Method B, 50 N; ISO 306
	215 °C	419 °F	Method A, 10 N; ISO 306
Flammability, UL94	HB	HB	IEC 60695
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	HB	HB	IEC 60695
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	IEC 60093
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	IEC 60093
Dielectric Constant	3.7	3.7	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	27.0 kV/mm	686 kV/in	K20/P50; IEC 60243-1
Dissipation Factor	0.010	0.010	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	225 V	225 V	100 drops value; IEC 60112
	250 V	250 V	Test Solution A CTI; IEC 60112

Descriptive Properties	Value	Comments
Electrolytic Corrosion	A1	IEC 60426

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