

## Evonik Corporation Vestodur® 1003-FR3 Low Viscosity, Self Extinguishing PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), Unreinforced, Molded

### 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: Compounds made self-extinguishing with non-migrating flame retardants, reinforced and unreinforced, for use in electrical applications in particular. The compounds are listed by UL (Underwriters Laboratories), partially down to 0.4 mm wall thickness or with addition of up to 50 wt.-% regrind. Information provided by degussa.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Evonik-Corporation-Vestodur-1003-FR3-Low-Viscosity-Self-Extinguishing-PBT.php](http://www.lookpolymers.com/polymer_Evonik-Corporation-Vestodur-1003-FR3-Low-Viscosity-Self-Extinguishing-PBT.php)

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/in <sup>3</sup>	ISO 1183
Water Absorption at Saturation	0.40 %	0.40 %	ISO 62
Linear Mold Shrinkage	0.019 cm/cm	0.019 in/in	Pigmentation can change mold shrinkage.
Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	Pigmentation can change mold shrinkage.
Melt Flow	52.5 g/10 min @Load 2.16 kg, Temperature 250 °C	52.5 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	81	81	ISO 868
Ball Indentation Hardness	160 MPa	23200 psi	H30; ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	5 mm/min; ISO 527-1/2
Elongation at Break	3.0 %	3.0 %	5 mm/min; ISO 527-1/2
Tensile Modulus	3.10 GPa	450 ksi	ISO 527-1/2
Charpy Impact Unnotched	2.50 J/cm <sup>2</sup> @Temperature -30.0 °C	11.9 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eU
	2.50 J/cm <sup>2</sup> @Temperature 23.0 °C	11.9 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179/1eU
	0.300 J/cm <sup>2</sup>	1.43 ft-lb/in <sup>2</sup>	

Charpy Impact, Notched Mechanical Properties	Metric @Temperature -30.0 °C	English @Temperature -22.0 °F	ISO 179/1eA Comments
	0.300 J/cm <sup>2</sup>	1.43 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	110 µm/m-°C @Temperature 23.0 - 55.0 °C	61.1 µin/in-°F @Temperature 73.4 - 131 °F	Longitudinal; ISO 11359
CTE, linear, Transverse to Flow	110 µm/m-°C @Temperature 23.0 - 55.0 °C	61.1 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359
Melting Point	221 - 226 °C	430 - 439 °F	DSC
Deflection Temperature at 0.46 MPa (66 psi)	185 °C	365 °F	ISO 75-1/2
Deflection Temperature at 1.8 MPa (264 psi)	80.0 °C	176 °F	ISO 75-1/2
Vicat Softening Point	192 °C	378 °F	50N; ISO 306
	216 °C	421 °F	10N; ISO 306
Flammability, UL94	V-0 @Thickness 0.400 mm	V-0 @Thickness 0.0157 in	
	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	
	V-0 @Thickness 0.800 mm	V-0 @Thickness 0.0315 in	
Oxygen Index	32 %	32 %	ISO 4589
Glow Wire Test	960 °C @Thickness 2.00 mm	1760 °F @Thickness 0.0787 in	IEC 60695-2-1/0-3

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	3.4 @Frequency 100 Hz	3.4 @Frequency 100 Hz	IEC 60250

Electrical Properties	<sup>3,4</sup> Metric	<sup>3,4</sup> English	Comments
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	27.0 kV/mm	686 kV/in	K20/P50; IEC 60243-1
Dissipation Factor	0.0020	0.0020	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.020	0.020	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	225 V	225 V	Test Solution A, 100 drops; IEC 60112
	250 V	250 V	Test Solution A, CTI; IEC 60112

Descriptive Properties	Value	Comments
Color	Natural, White	
Electrolytic Corrosion	A1 Step	IEC 60426

## Contact Songhan Plastic Technology Co.,Ltd.

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