

## Evonik Corporation Vestodur® 1003-FR5 Flame Retardant PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), Flame Retardant

### Material Notes:

Description: VESTODUR 1003-FR5 is an unreinforced, low-viscosity, quick setting semicrystalline thermoplastic compound for injection molding, based on polybutylene terephthalate (PBT). It has a white color. Test bars made of these compounds are rated V-0 according to UL94 by Underwriters Laboratories Inc., self-extinguishing and non-dripping. The compounds are especially suitable for parts which are subjected to high mechanical and thermal loads. Information provided by degussa.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Evonik-Corporation-Vestodur-1003-FR5-Flame-Retardant-PBT.php](http://www.lookpolymers.com/polymer_Evonik-Corporation-Vestodur-1003-FR5-Flame-Retardant-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	0.018 - 0.020 cm/cm @Thickness 2.00 mm	0.018 - 0.020 in/in @Thickness 0.0787 in	sheet with film gate at rim, mold temperature 80°C
Linear Mold Shrinkage, Transverse	0.018 - 0.020 cm/cm	0.018 - 0.020 in/in	
Melt Flow	67.5 g/10 min @Load 2.16 kg, Temperature 250 °C	67.5 g/10 min @Load 4.76 lb, Temperature 482 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	81	81	ISO 868
Tensile Strength at Break	55.0 MPa	7980 psi	ISO 527-1/2
Elongation at Break	5.0 %	5.0 %	ISO 527-1/2
Tensile Modulus	3.00 GPa	435 ksi	ISO 527-1/-2
Charpy Impact Unnotched	3.00 J/cm <sup>2</sup> @Temperature -30.0 °C	14.3 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eU
	3.00 J/cm <sup>2</sup> @Temperature 23.0 °C	14.3 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.300 J/cm <sup>2</sup> @Temperature -30.0 °C	1.43 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eA
	0.300 J/cm <sup>2</sup> @Temperature 23.0 °C	1.43 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear	100 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Longitudinal; ISO 11359, DIN 53752
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	100 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359, DIN 53752
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	
Vicat Softening Point	192 $^{\circ}\text{C}$	378 $^{\circ}\text{F}$	Method B, 50 N; ISO 306
	216 $^{\circ}\text{C}$	421 $^{\circ}\text{F}$	Method A, 10 N; ISO 306
Flammability, UL94	V-0	V-0	IEC 60695
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	V-0	V-0	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+13 ohm	1.00e+13 ohm	IEC 60093
Comparative Tracking Index	225 V	225 V	100 drops value; IEC 60112
	250 V	250 V	Test Solution A CTI; IEC 60112

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