



## Product Data Sheet & General Processing Conditions

### VLF 81007 Polybutylene Terephthalate (PBT) Long Glass Fiber

#### PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	40 %	40 %	
Specific Gravity	1.63	1.63	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0010 - 0.0030 in/in	0.10 - 0.30 %	D 955

#### MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	4.5 ft-lbs/in	240 J/m	D 256
unnotched 1/8 in (3.2 mm) section	16.0 ft-lbs/in	854 J/m	D 4812
Tensile Strength	21000 psi	145 MPa	D 638
Tensile Elongation	1.5 %	1.5 %	D 638
Tensile Modulus	1.90 x 10 <sup>6</sup> psi	13100 MPa	D 638
Flexural Strength	32000 psi	221 MPa	D 790
Flexural Modulus	1.80 x 10 <sup>6</sup> psi	12411 MPa	D 790

#### THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	400 °F	204 °C	D 648
Ignition Resistance* Flammability**	HB @ 1/16 in	HB @ 1.5 mm	D 635

#### PROPERTY NOTES

Data herein is typical and not to be construed as specifications.

Unless otherwise specified, all data listed is for natural or black colored materials. Pigments can affect properties.

\* This rating is not intended to reflect hazards of this or any other material under actual fire conditions.

\*\* Values per RTP Company testing.

#### GENERAL PROCESSING FOR INJECTION MOLDING

	English	SI Metric
Injection Pressure	10000 - 18000 psi	69 - 124 MPa
Melt Temperature	460 - 520 °F	238 - 271 °C
Mold Temperature	150 - 250 °F	66 - 121 °C
Drying	4 hrs @ 250 °F	4 hrs @ 121 °C
Moisture Content	0.02 %	0.02 %
Dew Point	-20 °F	-29 °C

#### PROCESSING NOTES

Use a reverse barrel profile. To maximize fiber length, the following injection barrel, screw, and tip designs should be followed. L/D ratio 16/1 - 22/1, Compression ratio 2:1, Flight depth 0.200 in (5 mm) minimum, in feed section, Screw diameter 0.65 - 0.80 in (16.5 - 20 mm) minimum, Compression section length 12 - 13 diameters, Check ring valve assembly - free flow type no restrictions, Nozzle orifice 0.250 in (6 mm) diameter. Feed throat from hopper to machine must have sufficient opening to prevent bridging of long pellet composition.

Desiccant Type Dryer Required.

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This information is intended to be used only as a guideline for designers and processors of modified thermoplastics. Because design and processing is complex, a set solution will not solve all problems. Observation on a "trial and error" basis may be required to achieve desired results.

Data are obtained from specimens molded under carefully controlled conditions from representative samples of the compound described herein. Properties may be materially affected by molding techniques applied and by the size and shape of the item molded. No assurance can be implied that all molded articles will have the same properties as those listed.

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