



**Product Data Sheet &
General Processing Conditions**

**VLF 81009
Polybutylene Terephthalate (PBT)
Long Glass Fiber
Preliminary Datasheet**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	50 %	50 %	
Specific Gravity	1.72	1.72	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	5.0 ft-lbs/in	267 J/m	D 256
unnotched 1/8 in (3.2 mm) section	10.0 ft-lbs/in	534 J/m	D 4812
Tensile Strength	16725 psi	115 MPa	D 638
Tensile Elongation	1.0 %	1.0 %	D 638
Tensile Modulus	2.35 x 10 ⁶ psi	16203 MPa	D 638
Flexural Strength	26100 psi	180 MPa	D 790
Flexural Modulus	2.14 x 10 ⁶ psi	14755 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 - 15000 psi	69 - 103 MPa
Melt Temperature	460 - 520 °F	238 - 271 °C
Mold Temperature	175 - 225 °F	79 - 107 °C
Drying	4 hrs @ 250 °F	4 hrs @ 121 °C
Moisture Content	0.03 %	0.03 %
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.