



**Product Data Sheet &  
General Processing Conditions**

**VLF 84009  
Polyphthalamide (PPA)  
Long Glass Fiber  
Heat Stabilized**

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

<b>PERMANENCE</b>	<b>English</b>	<b>SI Metric</b>	<b>ASTM TEST</b>
Primary Additive	50 %	50 %	
Specific Gravity	1.65	1.65	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	6.5 ft-lbs/in	347 J/m	D 256
unnotched 1/8 in (3.2 mm) section	20.0 ft-lbs/in	1068 J/m	D 4812
Tensile Strength	39000 psi	269 MPa	D 638
Tensile Elongation	1.0 - 2.0 %	1.0 - 2.0 %	D 638
Tensile Modulus	2.60 x 10 <sup>6</sup> psi	17927 MPa	D 638
Flexural Strength	56000 psi	386 MPa	D 790
Flexural Modulus	2.70 x 10 <sup>6</sup> psi	18616 MPa	D 790

**THERMAL**

Deflection Temperature @ 264 psi (1820 kPa)	530 °F	277 °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**

	<b>English</b>	<b>SI Metric</b>
Injection Pressure	10000 - 18000 psi	69 - 124 MPa
Melt Temperature	580 - 625 °F	304 - 329 °C
Mold Temperature	275 - 325 °F	135 - 163 °C
Drying	4 hrs @ 250 °F	4 hrs @ 121 °C
Moisture Content	0.05 %	0.05 %
Dew Point	-25 °F	-32 °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.