



Product Data Sheet & General Processing Conditions

VLF 81307 Polyphenylene Sulfide (PPS) Long Glass Fiber

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	40 %	40 %	
Specific Gravity	1.64	1.64	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0010 - 0.0020 in/in	0.10 - 0.20 %	D 955

MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	4.0 ft-lbs/in	214 J/m	D 256
unnotched 1/8 in (3.2 mm) section	10.0 ft-lbs/in	534 J/m	D 4812
Tensile Strength	24500 psi	169 MPa	D 638
Tensile Elongation	1.0 - 2.0 %	1.0 - 2.0 %	D 638
Tensile Modulus	2.30 x 10 ⁶ psi	15858 MPa	D 638
Flexural Strength	35000 psi	241 MPa	D 790
Flexural Modulus	2.20 x 10 ⁶ psi	15169 MPa	D 790

ELECTRICAL

Dielectric Strength, S/T, in oil	309 VPM	12.2 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	3.4	3.4	D 150
Dissipation Factor, 1 MHz, Dry	0.0009	0.0009	D 150

THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	510 °F	266 °C	D 648
Ignition Resistance*			
Flammability**	V-0 @ 1/16 in	V-0 @ 1.5 mm	D 3801

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	595 - 625 °F	313 - 329 °C
Mold Temperature	275 - 350 °F	135 - 177 °C
Drying	6 hrs @ 300 °F	6 hrs @ 149 °C
Moisture Content	0.04 %	0.04 %

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.

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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