



**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.