



**Product Data Sheet &  
General Processing Conditions**

**RTP 4001  
Polyphthalamide (PPA)  
Glass Fiber**

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

<b>PERMANENCE</b>	<b>English</b>	<b>SI Metric</b>	<b>ASTM TEST</b>
Primary Additive	10 %	10 %	
Specific Gravity	1.27	1.27	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0060 in/in	0.60 %	D 955
Water Absorption, 24 hrs @ 23°C	0.280 %	0.280 %	D 570

**MECHANICAL**

Impact Strength, Izod notched 1/8 in (3.2 mm) section	0.5 ft-lbs/in	27 J/m	D 256
unnotched 1/8 in (3.2 mm) section	5.0 ft-lbs/in	267 J/m	D 4812
Tensile Strength	13500 psi	93 MPa	D 638
Tensile Elongation	1.6 %	1.6 %	D 638
Tensile Modulus	1.00 x 10 <sup>6</sup> psi	6895 MPa	D 638
Flexural Strength	20500 psi	141 MPa	D 790
Flexural Modulus	0.80 x 10 <sup>6</sup> psi	5516 MPa	D 790
Hardness Rockwell, R	125	125	D 785

**ELECTRICAL**

Dielectric Strength, S/T, in oil	520 VPM	20.5 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	4.8	4.8	D 150
Dissipation Factor, 1 MHz, Dry	0.0210	0.0210	D 150
Volume Resistivity	> 1E15 ohm.cm	> 1E15 ohm.cm	D 257

**THERMAL**

Deflection Temperature @ 264 psi (1820 kPa)	420 °F	216 °C	D 648
Ignition Resistance* Flammability**	HB @ 1/16 in	HB @ 1.5 mm	D 635
Coefficient of Linear Thermal Expansion Flow Direction	2.1 x 10 <sup>-5</sup> /°F	3.8 x 10 <sup>-5</sup> /°C	E 831

**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	575 - 625 °F	302 - 329 °C
Mold Temperature	275 - 325 °F	135 - 163 °C
Drying	4 - 6 hrs @ 225 °F	4 - 6 hrs @ 107 °C
Moisture Content	0.05 %	0.05 %
Dew Point	-25 °F	-32 °C