



**Product Data Sheet &
General Processing Conditions**

**RTP 4009
Polyphthalamide (PPA)
Glass Fiber**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	50 %	50 %	
Specific Gravity	1.64	1.64	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0010 - 0.0030 in/in	0.10 - 0.30 %	D 955
Water Absorption, 24 hrs @ 23°C	0.160 %	0.160 %	D 570

MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	2.2 ft-lbs/in	117 J/m	D 256
unnotched 1/8 in (3.2 mm) section	17.0 ft-lbs/in	908 J/m	D 4812
Tensile Strength	36000 psi	248 MPa	D 638
Tensile Elongation	2.0 - 3.0 %	2.0 - 3.0 %	D 638
Tensile Modulus	2.68 x 10 ⁶ psi	18479 MPa	D 638
Flexural Strength	53000 psi	365 MPa	D 790
Flexural Modulus	2.50 x 10 ⁶ psi	17238 MPa	D 790
Hardness Rockwell, R	125	125	D 785

ELECTRICAL

Dielectric Strength, S/T, in oil	480 VPM	18.9 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	6.1	6.1	D 150
Dissipation Factor, 1 MHz, Dry	0.0090	0.0090	D 150
Volume Resistivity	> 1E15 ohm.cm	> 1E15 ohm.cm	D 257

THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	540 °F	282 °C	D 648
Ignition Resistance* Flammability**	HB @ 1/16 in	HB @ 1.5 mm	D 635
Coefficient of Linear Thermal Expansion Flow Direction	0.9 x 10 ⁻⁵ /°F	1.6 x 10 ⁻⁵ /°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

	English	SI Metric
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