



**Product Data Sheet &
General Processing Conditions**

**RTP 4081 AR 10 TFE 20
Polyphthalamide (PPA)
Carbon Fiber
Aramid Fiber
PTFE Lubricated**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	10 %	10 %	
Specific Gravity	1.40	1.40	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0015 - 0.0040 in/in	0.15 - 0.40 %	D 955

MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	0.9 ft-lbs/in	48 J/m	D 256
unnotched 1/8 in (3.2 mm) section	7.0 ft-lbs/in	374 J/m	D 4812
Tensile Strength	22500 psi	155 MPa	D 638
Tensile Elongation	1.5 - 2.5 %	1.5 - 2.5 %	D 638
Tensile Modulus	1.65 x 10 ⁶ psi	11377 MPa	D 638
Flexural Strength	32000 psi	221 MPa	D 790
Flexural Modulus	1.55 x 10 ⁶ psi	10687 MPa	D 790

ELECTRICAL

Volume Resistivity	< 1E5 ohm.cm	< 1E5 ohm.cm	D 257
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THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	500 °F	260 °C	D 648
Ignition Resistance* Flammability**	HB @ 1/16 in	HB @ 1.5 mm	D 635
Coefficient of Linear Thermal Expansion Flow Direction	1.2 x 10 ⁻⁵ /°F	2.2 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

PROCESSING NOTES

Desiccant Type Dryer Required.