



**Product Data Sheet &  
General Processing Conditions**

**RTP 4081 A  
(Hot Water Moldable) Polyphthalamide  
(PPA)  
Carbon 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	1.22	1.22	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0040 in/in	0.40 %	D 955
Water Absorption, 24 hrs @ 23°C	0.250 %	0.250 %	D 570

**MECHANICAL**

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	0.6 ft-lbs/in	32 J/m	D 256
unnotched 1/8 in (3.2 mm) section	5.0 ft-lbs/in	267 J/m	D 4812
Tensile Strength	17000 psi	117 MPa	D 638
Tensile Elongation	1.0 - 2.0 %	1.0 - 2.0 %	D 638
Tensile Modulus	1.30 x 10 <sup>6</sup> psi	8964 MPa	D 638
Flexural Strength	27000 psi	186 MPa	D 790
Flexural Modulus	1.20 x 10 <sup>6</sup> psi	8274 MPa	D 790
Hardness			
Rockwell, R	124	124	D 785

**ELECTRICAL**

Volume Resistivity	< 10E7 ohm.cm	< 10E7 ohm.cm	D 257
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**THERMAL**

Deflection Temperature			
@ 264 psi (1820 kPa)	530 °F	277 °C	D 648
Ignition Resistance*			
Flammability**	HB @ 1/16 in	HB @ 1.5 mm	D 635

**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 - 15000 psi	69 - 103 MPa
Melt Temperature	625 - 650 °F	329 - 343 °C
Mold Temperature	150 - 325 °F	66 - 163 °C
Drying	4 - 6 hrs @ 225 °F	4 - 6 hrs @ 107 °C
Moisture Content	0.10 %	0.10 %
Dew Point	-20 °F	-29 °C

**PROCESSING NOTES**

Desiccant Type Dryer Required.