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Product Data Sheet & General Processing Conditions

RTP 4083 Polyphthalamide (PPA) Carbon Fiber

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	20 %	20 %	
Specific Gravity	1.28	1.28	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0005 - 0.0020 in/in	0.05 - 0.20 %	D 955

MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	1.2 ft-lbs/in	64 J/m	D 256
unnotched 1/8 in (3.2 mm) section	12.0 ft-lbs/in	641 J/m	D 4812
Tensile Strength	35000 psi	241 MPa	D 638
Tensile Elongation	1.0 - 2.0 %	1.0 - 2.0 %	D 638
Tensile Modulus	2.70 x 10 ⁶ psi	18616 MPa	D 638
Flexural Strength	50000 psi	345 MPa	D 790
Flexural Modulus	2.30 x 10 ⁶ psi	15858 MPa	D 790

ELECTRICAL

Volume Resistivity	< 1E6 ohm.cm	< 1E6 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

	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.