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Product Data Sheet & General Processing Conditions

RTP 4087 A (Hot Water Moldable) Polyphthalamide (PPA) Carbon Fiber

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	40 %	40 %	
Specific Gravity	1.37	1.37	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0005 - 0.0015 in/in	0.05 - 0.15 %	D 955
Water Absorption, 24 hrs @ 23°C	0.200 %	0.200 %	D 570

MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	1.6 ft-lbs/in	85 J/m	D 256
unnotched 1/8 in (3.2 mm) section	16.0 ft-lbs/in	854 J/m	D 4812
Tensile Strength	40000 psi	276 MPa	D 638
Tensile Elongation	1.3 %	1.3 %	D 638
Tensile Modulus	5.00 x 10 ⁶ psi	34475 MPa	D 638
Flexural Strength	59000 psi	407 MPa	D 790
Flexural Modulus	4.00 x 10 ⁶ psi	27580 MPa	D 790
Hardness			
Rockwell, R	125	125	D 785

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

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 - 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.