



**Product Data Sheet &
General Processing Conditions**

**RTP 4087 UP
Polyphthalamide (PPA)
Carbon Fiber
Ultra Performance**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE | English | SI Metric | ASTM TEST |
|--|-----------------------|------------------|------------------|
| Primary Additive | 40 % | 40 % | |
| Specific Gravity | 1.38 | 1.38 | D 792 |
| Molding Shrinkage 1/8 in (3.2 mm) section | 0.0005 - 0.0010 in/in | 0.05 - 0.10 % | D 955 |

MECHANICAL

| | | | |
|--|----------------------------|-------------|--------|
| Impact Strength, Izod notched 1/8 in (3.2 mm) section | 1.5 ft-lbs/in | 80 J/m | D 256 |
| unnotched 1/8 in (3.2 mm) section | 15.0 ft-lbs/in | 801 J/m | D 4812 |
| Tensile Strength | 52000 psi | 359 MPa | D 638 |
| Tensile Elongation | 1.0 - 2.0 % | 1.0 - 2.0 % | D 638 |
| Tensile Modulus | 6.00 x 10 ⁶ psi | 41370 MPa | D 638 |
| Flexural Strength | 84000 psi | 579 MPa | D 790 |
| Flexural Modulus | 5.00 x 10 ⁶ psi | 34475 MPa | D 790 |

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.

GENERAL PROCESSING FOR INJECTION MOLDING

| | English | SI Metric |
|--------------------|-------------------|------------------|
| Injection Pressure | 12000 - 18000 psi | 83 - 124 MPa |
| Melt Temperature | 575 - 625 °F | 302 - 329 °C |
| Mold Temperature | 275 - 325 °F | 135 - 163 °C |
| Drying | 6 hrs @ 175 °F | 6 hrs @ 79 °C |
| Moisture Content | 0.05 % | 0.05 % |
| Dew Point | -25 °F | -32 °C |

PROCESSING NOTES

Desiccant Type Dryer Required.

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This information is intended to be used only as a guideline for designers and processors of modified thermoplastics. Because design and processing is complex, a set solution will not solve all problems. Observation on a "trial and error" basis may be required to achieve desired results.

Data are obtained from specimens molded under carefully controlled conditions from representative samples of the compound described herein. Properties may be materially affected by molding techniques applied and by the size and shape of the item molded. No assurance can be implied that all molded articles will have the same properties as those listed.

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