



**Product Data Sheet &
General Processing Conditions**

**RTP 4085
Polyphthalamide (PPA)
Carbon Fiber**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE | English | SI Metric | ASTM TEST |
|--|-----------------------|------------------|------------------|
| Primary Additive | 30 % | 30 % | |
| Specific Gravity | 1.33 | 1.33 | 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 | 1.4 ft-lbs/in | 75 J/m | D 256 |
| unnotched 1/8 in (3.2 mm) section | 14.0 ft-lbs/in | 747 J/m | D 4812 |
| Tensile Strength | 41000 psi | 283 MPa | D 638 |
| Tensile Elongation | 1.0 - 2.0 % | 1.0 - 2.0 % | D 638 |
| Tensile Modulus | 3.40 x 10 ⁶ psi | 23443 MPa | D 638 |
| Flexural Strength | 58000 psi | 400 MPa | D 790 |
| Flexural Modulus | 3.20 x 10 ⁶ psi | 22064 MPa | D 790 |

ELECTRICAL

| | | | |
|---------------------|--------------|--------------|--------------|
| Volume Resistivity | < 1E3 ohm.cm | < 1E3 ohm.cm | D 257 |
| Surface Resistivity | < 1E6 ohm/sq | < 1E6 ohm/sq | D 257 |
| Surface Resistance | < 1E5 ohm | < 1E5 ohm | ESD STM11.11 |

THERMAL

| | | | |
|--|--------------|-------------|-------|
| 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.