



**Product Data Sheet &
General Processing Conditions**

**RTP 2102
Polyetherimide (PEI)
Glass Fiber**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE | English | SI Metric | ASTM TEST |
|--|----------------|------------------|------------------|
| Specific Gravity | 1.37 | 1.37 | D 792 |
| Molding Shrinkage 1/8 in (3.2 mm) section | 0.0030 in/in | 0.30 % | D 955 |
| Water Absorption, 24 hrs @ 23°C | 0.220 % | 0.220 % | D 570 |

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 | 20000 psi | 138 MPa | D 638 |
| Tensile Elongation | 3.5 % | 3.5 % | D 638 |
| Tensile Modulus | 1.00 x 10 ⁶ psi | 6895 MPa | D 638 |
| Flexural Strength | 29000 psi | 200 MPa | D 790 |
| Flexural Modulus | 0.80 x 10 ⁶ psi | 5516 MPa | D 790 |
| Compressive Strength | 23000 psi | 159 MPa | D 695 |

ELECTRICAL

| | | | |
|----------------------------------|---------------|---------------|-------|
| Dielectric Strength, S/T, in oil | 500 VPM | 19.7 kV/mm | D 149 |
| Dielectric Constant, 1 MHz, Dry | 3.6 | 3.6 | D 150 |
| Dissipation Factor, 1 MHz, Dry | 0.0050 | 0.0050 | D 150 |
| Volume Resistivity | > 1E12 ohm.cm | > 1E12 ohm.cm | D 257 |

THERMAL

| | | | |
|---|--|----------------------------|--------|
| Deflection Temperature @ 264 psi (1820 kPa) | 405 °F | 207 °C | D 648 |
| @ 66 psi (455 kPa) | 410 °F | 210 °C | D 648 |
| Ignition Resistance* Flammability** | V-0 @ 1/16 in | V-0 @ 1.5 mm | D 3801 |
| Coefficient of Linear Thermal Expansion Flow Direction | 1.7 x 10 ⁻⁵ /°F | 3.1 x 10 ⁻⁵ /°C | E 831 |
| Thermal Conductivity Through-plane | 1.60 (BTU.in)/(hr.ft ² .°F) | 0.23 W/(m.K) | E 1530 |

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 | 12000 - 18000 psi | 83 - 124 MPa |
| Melt Temperature | 670 - 750 °F | 354 - 399 °C |
| Mold Temperature | 275 - 350 °F | 135 - 177 °C |
| Drying | 4 hrs @ 300 °F | 4 hrs @ 149 °C |
| Moisture Content | 0.04 % | 0.04 % |
| Dew Point | -20 °F | -29 °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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