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Ponciplastics.com



## Product Data Sheet & General Processing Conditions

### RTP 4009 Polyphthalamide (PPA) Glass Fiber

#### PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE                                   | English               | SI Metric     | ASTM TEST |
|----------------------------------------------|-----------------------|---------------|-----------|
| Primary Additive                             | 50 %                  | 50 %          |           |
| Specific Gravity                             | 1.64                  | 1.64          | D 792     |
| Molding Shrinkage<br>1/8 in (3.2 mm) section | 0.0010 - 0.0030 in/in | 0.10 - 0.30 % | D 955     |
| Water Absorption, 24 hrs @ 23°C              | 0.160 %               | 0.160 %       | D 570     |

#### MECHANICAL

|                                                          |                            |             |        |
|----------------------------------------------------------|----------------------------|-------------|--------|
| Impact Strength, Izod<br>notched 1/8 in (3.2 mm) section | 2.2 ft-lbs/in              | 117 J/m     | D 256  |
| unnotched 1/8 in (3.2 mm) section                        | 17.0 ft-lbs/in             | 908 J/m     | D 4812 |
| Tensile Strength                                         | 36000 psi                  | 248 MPa     | D 638  |
| Tensile Elongation                                       | 2.0 - 3.0 %                | 2.0 - 3.0 % | D 638  |
| Tensile Modulus                                          | 2.68 x 10 <sup>6</sup> psi | 18479 MPa   | D 638  |
| Flexural Strength                                        | 53000 psi                  | 365 MPa     | D 790  |
| Flexural Modulus                                         | 2.50 x 10 <sup>6</sup> psi | 17238 MPa   | D 790  |
| Hardness<br>Rockwell, R                                  | 125                        | 125         | D 785  |

#### ELECTRICAL

|                                  |               |               |       |
|----------------------------------|---------------|---------------|-------|
| Dielectric Strength, S/T, in oil | 480 VPM       | 18.9 kV/mm    | D 149 |
| Dielectric Constant, 1 MHz, Dry  | 6.1           | 6.1           | D 150 |
| Dissipation Factor, 1 MHz, Dry   | 0.0090        | 0.0090        | D 150 |
| Volume Resistivity               | > 1E15 ohm.cm | > 1E15 ohm.cm | D 257 |

#### THERMAL

|                                                           |                            |                            |       |
|-----------------------------------------------------------|----------------------------|----------------------------|-------|
| Deflection Temperature<br>@ 264 psi (1820 kPa)            | 540 °F                     | 282 °C                     | D 648 |
| Ignition Resistance*                                      |                            |                            |       |
| Flammability**                                            | HB @ 1/16 in               | HB @ 1.5 mm                | D 635 |
| Coefficient of Linear Thermal Expansion<br>Flow Direction | 0.9 x 10 <sup>-5</sup> /°F | 1.6 x 10 <sup>-5</sup> /°C | E 831 |

#### 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             |