



**Product Data Sheet &  
General Processing Conditions**

**RTP 4001 A  
(Hot Water Moldable) Polyphthalamide  
(PPA)  
Glass Fiber**

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

| <b>PERMANENCE</b>                            | <b>English</b>        | <b>SI Metric</b> | <b>ASTM<br/>TEST</b> |
|----------------------------------------------|-----------------------|------------------|----------------------|
| Primary Additive                             | 10 %                  | 10 %             |                      |
| Specific Gravity                             | 1.26                  | 1.26             | D 792                |
| Molding Shrinkage<br>1/8 in (3.2 mm) section | 0.0070 - 0.0100 in/in | 0.70 - 1.00 %    | D 955                |
| Water Absorption, 24 hrs @ 23°C              | 0.280 %               | 0.280 %          | D 570                |

**MECHANICAL**

|                                                          |                            |          |        |
|----------------------------------------------------------|----------------------------|----------|--------|
| Impact Strength, Izod<br>notched 1/8 in (3.2 mm) section | 0.6 ft-lbs/in              | 32 J/m   | D 256  |
| unnotched 1/8 in (3.2 mm) section                        | 4.0 ft-lbs/in              | 214 J/m  | D 4812 |
| Tensile Strength                                         | 13000 psi                  | 90 MPa   | D 638  |
| Tensile Elongation                                       | 2.0 %                      | 2.0 %    | D 638  |
| Tensile Modulus                                          | 0.80 x 10 <sup>6</sup> psi | 5516 MPa | D 638  |
| Flexural Strength                                        | 20500 psi                  | 141 MPa  | D 790  |
| Flexural Modulus                                         | 0.70 x 10 <sup>6</sup> psi | 4826 MPa | D 790  |
| Hardness<br>Rockwell, R                                  | 125                        | 125      | D 785  |

**ELECTRICAL**

|                    |               |               |       |
|--------------------|---------------|---------------|-------|
| Volume Resistivity | > 1E15 ohm.cm | > 1E15 ohm.cm | D 257 |
|--------------------|---------------|---------------|-------|

**THERMAL**

|                                                |              |             |       |
|------------------------------------------------|--------------|-------------|-------|
| Deflection Temperature<br>@ 264 psi (1820 kPa) | 470 °F       | 243 °C      | D 648 |
| Ignition Resistance*<br>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**

|                    | <b>English</b>     | <b>SI Metric</b>   |
|--------------------|--------------------|--------------------|
| 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.