



**Product Data Sheet &  
General Processing Conditions**

**RTP 1400 A-300  
Polyethersulfone (PES)**

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

| <b>PERMANENCE</b>                            | <b>English</b>        | <b>SI Metric</b> | <b>ASTM TEST</b> |
|--|-----------------------|------------------|------------------|
| Specific Gravity                             | 1.37                  | 1.37             | D 792            |
| Molding Shrinkage<br>1/8 in (3.2 mm) section | 0.0070 - 0.0090 in/in | 0.70 - 0.90 %    | D 955            |
| Water Absorption, 24 hrs @ 23°C              | 0.430 %               | 0.430 %          | D 570            |

**MECHANICAL**

|  |                            |          |        |
|--|----------------------------|----------|--------|
| Impact Strength, Izod<br>notched 1/8 in (3.2 mm) section | 1.0 ft-lbs/in              | 53 J/m   | D 256  |
| unnotched 1/8 in (3.2 mm) section                        | No Break                   | No Break | D 4812 |
| Tensile Strength   | 12000 psi                  | 83 MPa   | D 638  |
| Tensile Elongation                                       | 50.0 %                     | 50.0 %   | D 638  |
| Tensile Modulus  | 0.38 x 10 <sup>6</sup> psi | 2620 MPa | D 638  |
| Flexural Strength  | 18000 psi                  | 124 MPa  | D 790  |
| Flexural Modulus   | 0.40 x 10 <sup>6</sup> psi | 2758 MPa | D 790  |

**ELECTRICAL**

|                    |               |               |       |
|--------------------|---------------|---------------|-------|
| Volume Resistivity | > 1E16 ohm.cm | > 1E16 ohm.cm | D 257 |
|--------------------|---------------|---------------|-------|

**THERMAL**

|  |               |              |        |
|--|---------------|--------------|--------|
| Deflection Temperature<br>@ 264 psi (1820 kPa) | 400 °F        | 204 °C       | D 648  |
| @ 66 psi (455 kPa)                             | 405 °F        | 207 °C       | D 648  |
| Ignition Resistance*<br>Flammability**         | V-0 @ 1/32 in | V-0 @ 0.8 mm | D 3801 |

**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   | 650 - 710 °F      | 343 - 377 °C     |
| Mold Temperature   | 275 - 350 °F      | 135 - 177 °C     |
| Drying             | 6 hrs @ 300 °F    | 6 hrs @ 149 °C   |
| Moisture Content   | 0.04 %            | 0.04 %           |
| Dew Point          | -25 °F            | -32 °C           |

**PROCESSING NOTES**

Desiccant Type Dryer Required.