



**Product Data Sheet &  
General Processing Conditions**

**RTP 4683  
Syndiotactic Polystyrene (SPS)  
Carbon Fiber**

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

| <b>PERMANENCE</b>                            | <b>English</b> | <b>SI Metric</b> | <b>ASTM TEST</b> |
|--|----------------|------------------|------------------|
| Primary Additive                             | 20 %           | 20 %             |                  |
| Specific Gravity                             | 1.12           | 1.12             | D 792            |
| Molding Shrinkage<br>1/8 in (3.2 mm) section | 0.0020 in/in   | 0.20 %           | D 955            |
| Water Absorption, 24 hrs @ 23°C              | 0.010 %        | 0.010 %          | D 570            |

**MECHANICAL**

|  |                            |           |        |
|--|----------------------------|-----------|--------|
| Impact Strength, Izod<br>notched 1/8 in (3.2 mm) section | 0.9 ft-lbs/in              | 48 J/m    | D 256  |
| unnotched 1/8 in (3.2 mm) section                        | 4.5 ft-lbs/in              | 240 J/m   | D 4812 |
| Tensile Strength   | 16800 psi                  | 116 MPa   | D 638  |
| Tensile Elongation                                       | 1.0 %                      | 1.0 %     | D 638  |
| Tensile Modulus  | 2.00 x 10 <sup>6</sup> psi | 13790 MPa | D 638  |
| Flexural Strength  | 22500 psi                  | 155 MPa   | D 790  |
| Flexural Modulus   | 1.80 x 10 <sup>6</sup> psi | 12411 MPa | D 790  |

**THERMAL**

|  |        |        |       |
|--|--------|--------|-------|
| Deflection Temperature<br>@ 264 psi (1820 kPa) | 450 °F | 232 °C | D 648 |
|--|--------|--------|-------|

**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.

**GENERAL PROCESSING FOR INJECTION MOLDING**

|                    | <b>English</b>    | <b>SI Metric</b> |
|--------------------|-------------------|------------------|
| Injection Pressure | 10000 - 15000 psi | 69 - 103 MPa     |
| Melt Temperature   | 560 - 620 °F      | 293 - 327 °C     |
| Mold Temperature   | 160 - 300 °F      | 71 - 149 °C      |
| Drying             | 2 hrs @ 180 °F    | 2 hrs @ 82 °C    |
| Moisture Content   | 0.02 %            | 0.02 %           |
| Dew Point          | -20 °F            | -29 °C           |