



## Product Data Sheet & General Processing Conditions

### RTP 4687 Syndiotactic Polystyrene (SPS) Carbon Fiber

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

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	40 %	40 %	
Specific Gravity	1.24	1.24	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0010 in/in	0.10 %	D 955
Water Absorption, 24 hrs @ 23°C	0.010 %	0.010 %	D 570

#### MECHANICAL

Impact Strength, Izod			
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	3.5 ft-lbs/in	187 J/m	D 4812
Tensile Strength	19500 psi	134 MPa	D 638
Tensile Elongation	0.6 %	0.6 %	D 638
Tensile Modulus	3.50 x 10 <sup>6</sup> psi	24132 MPa	D 638
Flexural Strength	27000 psi	186 MPa	D 790
Flexural Modulus	3.50 x 10 <sup>6</sup> psi	24132 MPa	D 790

#### THERMAL

Deflection Temperature			
@ 264 psi (1820 kPa)	460 °F	238 °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

	English	SI Metric
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

#### PROCESSING NOTES

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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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