



**Product Data Sheet &
General Processing Conditions**

**RTP 4685
Syndiotactic Polystyrene (SPS)
Carbon Fiber**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	30 %	30 %	
Specific Gravity	1.17	1.17	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	4.5 ft-lbs/in	240 J/m	D 4812
Tensile Strength	18500 psi	128 MPa	D 638
Tensile Elongation	0.7 %	0.7 %	D 638
Tensile Modulus	2.90 x 10 ⁶ psi	19996 MPa	D 638
Flexural Strength	26000 psi	179 MPa	D 790
Flexural Modulus	2.60 x 10 ⁶ psi	17927 MPa	D 790

THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	460 °F	238 °C	D 648
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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