



Product Data Sheet & General Processing Conditions

RTP 4681 Syndiotactic Polystyrene (SPS) Carbon Fiber

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	10 %	10 %	
Specific Gravity	1.08	1.08	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0030 in/in	0.30 %	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	0.8 ft-lbs/in	43 J/m	D 256
unnotched 1/8 in (3.2 mm) section	2.7 ft-lbs/in	144 J/m	D 4812
Tensile Strength	12500 psi	86 MPa	D 638
Tensile Elongation	1.1 %	1.1 %	D 638
Tensile Modulus	1.10 x 10 ⁶ psi	7584 MPa	D 638
Flexural Strength	16500 psi	114 MPa	D 790
Flexural Modulus	1.10 x 10 ⁶ psi	7584 MPa	D 790

THERMAL

Deflection Temperature			
@ 264 psi (1820 kPa)	400 °F	204 °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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