



Product Data Sheet & General Processing Conditions

RTP 4285 Thermoplastic Polyimide (TPI) Carbon Fiber

Properties are based on annealed specimens.

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	30 %	30 %	
Specific Gravity	1.42	1.42	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0002 - 0.0010 in/in	0.02 - 0.10 %	D 955

MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	1.6 ft-lbs/in	85 J/m	D 256
unnotched 1/8 in (3.2 mm) section	14.0 ft-lbs/in	747 J/m	D 4812
Tensile Strength	32000 psi	221 MPa	D 638
Tensile Elongation	1.5 - 2.5 %	1.5 - 2.5 %	D 638
Tensile Modulus	2.90 x 10 ⁶ psi	19996 MPa	D 638
Flexural Strength	48000 psi	331 MPa	D 790
Flexural Modulus	2.80 x 10 ⁶ psi	19306 MPa	D 790

THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	> 500 °F	> 260 °C	D 648
Ignition Resistance*			
Flammability**	V-0 @ 1/16 in	V-0 @ 1.5 mm	D 3801
Coefficient of Linear Thermal Expansion			
Flow Direction	0.3 x 10 ⁻⁵ /°F	0.5 x 10 ⁻⁵ /°C	E 831
Transverse Direction	2.6 x 10 ⁻⁵ /°F	4.7 x 10 ⁻⁵ /°C	E 831

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

	English	SI Metric
Injection Pressure	20000 - 28000 psi	138 - 193 MPa
Melt Temperature	750 - 780 °F	399 - 416 °C
Mold Temperature	350 - 450 °F	177 - 232 °C
Drying	6 hrs @ 400 °F	6 hrs @ 204 °C
Moisture Content	0.01 %	0.01 %
Dew Point	-40 °F	-40 °C

PROCESSING NOTES

Desiccant Type Dryer Required.

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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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RTP COMPANY • 580 EAST FRONT STREET • WINONA, MN 55987 • 507-454-6900