



## Product Data Sheet & General Processing Conditions

### RTP 1405 N Polyethersulfone (PES) Glass Fiber High Viscosity

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

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	30 %	30 %	
Specific Gravity	1.59	1.59	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0020 in/in	0.20 %	D 955
Water Absorption, 24 hrs @ 23°C	0.350 %	0.350 %	D 570

#### MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	1.8 ft-lbs/in	96 J/m	D 256
unnotched 1/8 in (3.2 mm) section	14.0 ft-lbs/in	747 J/m	D 4812
Tensile Strength	21500 psi	148 MPa	D 638
Tensile Elongation	2.6 %	2.6 %	D 638
Tensile Modulus	1.40 x 10 <sup>6</sup> psi	9653 MPa	D 638
Flexural Strength	30500 psi	210 MPa	D 790
Flexural Modulus	1.30 x 10 <sup>6</sup> psi	8964 MPa	D 790
Compressive Strength	21000 psi	145 MPa	D 695
Hardness			
Rockwell, R	123	123	D 785

#### ELECTRICAL

Dielectric Strength, S/T, in oil	370 VPM	14.6 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	4.2	4.2	D 150
Dissipation Factor, 1 MHz, Dry	0.0070	0.0070	D 150
Arc Resistance	75 s	75 s	D 495
Volume Resistivity	> 1E12 ohm.cm	> 1E12 ohm.cm	D 257

#### THERMAL

Deflection Temperature			
@ 264 psi (1820 kPa)	420 °F	216 °C	D 648
@ 66 psi (455 kPa)	430 °F	221 °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	1.5 x 10 <sup>-5</sup> /°F	2.7 x 10 <sup>-5</sup> /°C	E 831
Thermal Conductivity			
Through-plane	2.20 (BTU.in)/(hr.ft <sup>2</sup> .°F)	0.32 W/(m.K)	E 1530

#### 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	10000 - 15000 psi	69 - 103 MPa
Melt Temperature	650 - 710 °F	343 - 377 °C

Mold Temperature	275 - 350 °F	135 - 177 °C
Drying	6 hrs @ 300 °F	6 hrs @ 149 °C
Moisture Content	0.04 %	0.04 %
Dew Point	-25 °F	-32 °C

## PROCESSING NOTES

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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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