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Product Data Sheet & General Processing Conditions

RTP 1407 Polyethersulfone (PES) Glass Fiber

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	40 %	40 %	
Specific Gravity	1.68	1.68	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	0.300 %	0.300 %	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	12.5 ft-lbs/in	667 J/m	D 4812
Tensile Strength	23000 psi	159 MPa	D 638
Tensile Elongation	2.1 %	2.1 %	D 638
Tensile Modulus	1.80 x 10 ⁶ psi	12411 MPa	D 638
Flexural Strength	32500 psi	224 MPa	D 790
Flexural Modulus	1.70 x 10 ⁶ psi	11722 MPa	D 790
Compressive Strength	22000 psi	152 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	4.3	4.3	D 150
Dissipation Factor, 1 MHz, Dry	0.0070	0.0070	D 150
Arc Resistance	80 s	80 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	1.4 x 10 ⁻⁵ /°F	2.5 x 10 ⁻⁵ /°C	E 831
Thermal Conductivity			
Through-plane	2.50 (BTU.in)/(hr.ft ² .°F)	0.36 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