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Product Data Sheet & General Processing Conditions

RTP 1400 Polyethersulfone (PES)

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Specific Gravity	1.37	1.37	D 792
Melt Flow Rate			
@ 385 °C, / 2.16 kg	80.00 g/10 min	80.00 g/10 min	D 1238
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0070 in/in	0.70 %	D 955
Water Absorption, 24 hrs @ 23°C	0.540 %	0.540 %	D 570

MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	1.3 ft-lbs/in	69 J/m	D 256
Tensile Strength	12000 psi	83 MPa	D 638
Tensile Elongation	30.0 %	30.0 %	D 638
Tensile Modulus	0.39 x 10 ⁶ psi	2689 MPa	D 638
Flexural Strength	16100 psi	111 MPa	D 790
Flexural Modulus	0.42 x 10 ⁶ psi	2896 MPa	D 790

ELECTRICAL

Dielectric Strength, S/T, in oil	380 VPM	15.0 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	3.5	3.5	D 150
Dissipation Factor, 1 MHz, Dry	0.0056	0.0056	D 150
Volume Resistivity	> 1E12 ohm.cm	> 1E12 ohm.cm	D 257

THERMAL

Deflection Temperature			
@ 264 psi (1820 kPa)	398 °F	203 °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	2.7 x 10 ⁻⁵ /°F	4.9 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	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

Desiccant Type Dryer Required.