



Product Data Sheet & General Processing Conditions

RTP 3405-3 Liquid Crystal Polymer (LCP) Glass Fiber

Liquid crystal polymers offer outstanding heat and chemical resistance and are inherently ignition resistant. The unique self-reinforcing crystalline structure allows a molding cycle that is faster than normal and it's excellent processability all but eliminates the need for complicated tooling designs.

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	30 %	30 %	
Specific Gravity	1.61	1.61	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0010 - 0.0025 in/in	0.10 - 0.25 %	D 955

MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	2.1 ft-lbs/in	112 J/m	D 256
unnotched 1/8 in (3.2 mm) section	10.0 ft-lbs/in	534 J/m	D 4812
Tensile Strength	19500 psi	134 MPa	D 638
Tensile Elongation	1.0 - 2.0 %	1.0 - 2.0 %	D 638
Tensile Modulus	2.40 x 10 ⁶ psi	16548 MPa	D 638
Flexural Strength	26000 psi	179 MPa	D 790
Flexural Modulus	2.00 x 10 ⁶ psi	13790 MPa	D 790
Hardness Rockwell, R	105	105	D 785

ELECTRICAL

Dielectric Strength, S/T, in oil	560 VPM	22.0 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	3.7	3.7	D 150
Dissipation Factor, 1 MHz, Dry	0.0300	0.0300	D 150

THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	530 °F	277 °C	D 648
Ignition Resistance* Flammability**	V-0 @ 1/32 in	V-0 @ 0.8 mm	D 3801

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	12000 - 18000 psi	83 - 124 MPa
Melt Temperature	630 - 690 °F	332 - 366 °C
Mold Temperature	150 - 250 °F	66 - 121 °C
Drying	8 hrs @ 300 °F	8 hrs @ 149 °C
Dew Point	-20 °F	-29 °C