Imagineering Plastics ®

# *Product Data Sheet &*
# *General Processing Conditions*

## RTP 3499-3 X 113393 A
## Liquid Crystal Polymer (LCP)
## Glass Fiber
## LDS Platable

Dielectric Constant K: 4.18 at 1 GHz, 4.02 at 3 GHz, 4.04 at 5 GHz Dissipation factor DF: 0.0067 at 1 GHz, 0.0059 at 3 GHz, 0.0056 at 5 GHz

### PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| **PERMANENCE** | **English** | **SI Metric** | **ASTM TEST** |
|---|---|---|---|
| Specific Gravity | 1.76 | 1.76 | D 792 |
| Molding Shrinkage | | | |
| 1/8 in (3.2 mm) section | 0.0015 in/in | 0.15 % | D 955 |

| **MECHANICAL** | | | |
|---|---|---|---|
| Impact Strength, Izod | | | |
| notched 1/8 in (3.2 mm) section | 3.9 ft-lbs/in | 208 J/m | D 256 |
| unnotched 1/8 in (3.2 mm) section | 14.0 ft-lbs/in | 747 J/m | D 4812 |
| Tensile Strength | 17900 psi | 123 MPa | D 638 |
| Tensile Elongation | 2.0 - 3.0 % | 2.0 - 3.0 % | D 638 |
| Tensile Modulus | 1.80 x 10^6 psi | 12411 MPa | D 638 |
| Flexural Strength | 24000 psi | 165 MPa | D 790 |
| Flexural Modulus | 1.80 x 10^6 psi | 12411 MPa | D 790 |

| **ELECTRICAL** | | | |
|---|---|---|---|
| Dielectric Constant, 1 MHz, Dry | 3.8 | 3.8 | D 150 |
| Dissipation Factor, 1 MHz, Dry | 0.0300 | 0.0300 | D 150 |

| **THERMAL** | | | |
|---|---|---|---|
| Deflection Temperature | | | |
| @ 264 psi (1820 kPa) | 455 °F | 235 °C | D 648 |
| @ 66 psi (455 kPa) | 530 °F | 277 °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 | 0.6 x $10^{-5}$/°C | E 831 |
| Transverse Direction | 3.6 x $10^{-5}$/°F | 6.5 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 | 12000 - 18000 psi | 83 - 124 MPa |
| Melt Temperature | 620 - 680 °F | 327 - 360 °C |
| Mold Temperature | 150 - 250 °F | 66 - 121 °C |
| Drying | 8 hrs @ 300 °F | 8 hrs @ 149 °C |
| Dew Point | -20 °F | -29 °C |