



**Product Data Sheet &
General Processing Conditions**

**RTP 3499-4 X 91192 A
Liquid Crystal Polymer (LCP)
High Heat Encapsulation Grade**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE | English | SI Metric | ASTM TEST |
|--|-----------------------|------------------|------------------|
| Specific Gravity | 1.70 | 1.70 | D 792 |
| Molding Shrinkage 1/8 in (3.2 mm) section | 0.0020 - 0.0040 in/in | 0.20 - 0.40 % | D 955 |

MECHANICAL

| | | | |
|--|----------------------------|-------------|--------|
| Impact Strength, Izod notched 1/8 in (3.2 mm) section | 1.7 ft-lbs/in | 91 J/m | D 256 |
| unnotched 1/8 in (3.2 mm) section | 3.5 ft-lbs/in | 187 J/m | D 4812 |
| Tensile Strength | 14500 psi | 100 MPa | D 638 |
| Tensile Elongation | 1.0 - 2.0 % | 1.0 - 2.0 % | D 638 |
| Tensile Modulus | 1.90 x 10 ⁶ psi | 13100 MPa | D 638 |
| Flexural Strength | 23000 psi | 159 MPa | D 790 |
| Flexural Modulus | 1.80 x 10 ⁶ psi | 12411 MPa | D 790 |

ELECTRICAL

| | | | |
|---------------------------------|-----|-----|-------|
| Dielectric Constant, 1 MHz, Dry | 3.6 | 3.6 | D 150 |
|---------------------------------|-----|-----|-------|

THERMAL

| | | | |
|--|---------------|--------------|--------|
| Deflection Temperature @ 264 psi (1820 kPa) | 560 °F | 293 °C | D 648 |
| @ 66 psi (455 kPa) | > 572 °F | > 300 °C | D 648 |
| Ignition Resistance* Flammability** | V-0 @ 1/16 in | V-0 @ 1.5 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 | 10000 - 18000 psi | 69 - 124 MPa |
| Melt Temperature | 685 - 750 °F | 363 - 399 °C |
| Mold Temperature | 150 - 200 °F | 66 - 93 °C |
| Drying | 8 hrs @ 300 °F | 8 hrs @ 149 °C |
| Dew Point | -20 °F | -29 °C |

PROCESSING NOTES

The key to successfully molding this material is to start mold open cycles as soon as the screw reaches its retracted position.