




**Product Data Sheet &
General Processing Conditions**

**RTP 301-500
Polycarbonate (PC)
Glass Fiber
Flame Retardant
Non-PBBO/E
UL94 V-0**



RTP 301-500 is an ignition resistant, glass fiber reinforced polycarbonate material which exhibits improved stiffness while maintaining moldability, dimensional stability and toughness of unreinforced grades.

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE | English | SI Metric | ASTM TEST |
|---------------------------------|-----------------------|------------------|------------------|
| Primary Additive | 10 % | 10 % | |
| Specific Gravity | 1.27 | 1.27 | D 792 |
| Molding Shrinkage | | | |
| 1/8 in (3.2 mm) section | 0.0030 - 0.0050 in/in | 0.30 - 0.50 % | D 955 |
| Water Absorption, 24 hrs @ 23°C | 0.100 % | 0.100 % | D 570 |

MECHANICAL

| | | | |
|-----------------------------------|----------------------------|-------------|--------|
| Impact Strength, Izod | | | |
| notched 1/8 in (3.2 mm) section | 2.5 ft-lbs/in | 133 J/m | D 256 |
| unnotched 1/8 in (3.2 mm) section | 35.0 ft-lbs/in | 1869 J/m | D 4812 |
| Tensile Strength | 9500 psi | 66 MPa | D 638 |
| Tensile Elongation | 5.0 - 8.0 % | 5.0 - 8.0 % | D 638 |
| Tensile Modulus | 0.55 x 10 ⁶ psi | 3792 MPa | D 638 |
| Flexural Strength | 16000 psi | 110 MPa | D 790 |
| Flexural Modulus | 0.50 x 10 ⁶ psi | 3448 MPa | D 790 |
| Hardness | | | |
| Rockwell, R | 118 | 118 | D 785 |

ELECTRICAL

| | | | |
|----------------------------------|---------------|---------------|-------|
| Dielectric Strength, S/T, in oil | 500 VPM | 19.7 kV/mm | D 149 |
| Dielectric Constant, 1 MHz, Dry | 3.1 | 3.1 | D 150 |
| Dissipation Factor, 1 MHz, Dry | 0.0080 | 0.0080 | D 150 |
| Volume Resistivity | > 1E16 ohm.cm | > 1E16 ohm.cm | D 257 |

THERMAL

| | | | |
|------------------------|---------------|--------------|-------|
| Deflection Temperature | | | |
| @ 264 psi (1820 kPa) | 290 °F | 143 °C | D 648 |
| @ 66 psi (455 kPa) | 300 °F | 149 °C | D 648 |
| Ignition Resistance* | | | |
| Flammability | V-0 @ 1/16 in | V-0 @ 1.5 mm | UL94 |
| Flammability | 5VA @ 1/8 in | 5VA @ 3.0 mm | UL94 |

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.

GENERAL PROCESSING FOR INJECTION MOLDING

| | English | SI Metric |
|--------------------|-------------------|------------------|
| Injection Pressure | 10000 - 15000 psi | 69 - 103 MPa |

| | | |
|------------------|----------------|----------------|
| Melt Temperature | 550 - 600 °F | 288 - 316 °C |
| Mold Temperature | 180 - 250 °F | 82 - 121 °C |
| Drying | 4 hrs @ 250 °F | 4 hrs @ 121 °C |
| Moisture Content | 0.02 % | 0.02 % |
| Dew Point | -20 °F | -29 °C |

PROCESSING NOTES

Desiccant Type Dryer Required.