



**Product Data Sheet &
General Processing Conditions**

**RTP 307 FR
Polycarbonate (PC)
Glass Fiber
Flame Retardant
Non-PBBO/E
UL94 V-0**



The RTP series of flame retardant, glass fiber reinforced polycarbonate materials offer dimensional stability with improved heat distortion and ignition resistance performance over the base resin.

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE | English | SI Metric | ASTM TEST |
|---------------------------------|-----------------------|------------------|------------------|
| Primary Additive | 40 % | 40 % | |
| Specific Gravity | 1.52 | 1.52 | D 792 |
| Molding Shrinkage | | | |
| 1/8 in (3.2 mm) section | 0.0005 - 0.0020 in/in | 0.05 - 0.20 % | D 955 |
| Water Absorption, 24 hrs @ 23°C | 0.070 % | 0.070 % | D 570 |

MECHANICAL

| | | | |
|-----------------------------------|----------------------------|-------------|--------|
| Impact Strength, Izod | | | |
| notched 1/8 in (3.2 mm) section | 3.3 ft-lbs/in | 176 J/m | D 256 |
| unnotched 1/8 in (3.2 mm) section | 17.0 ft-lbs/in | 908 J/m | D 4812 |
| Tensile Strength | 21000 psi | 145 MPa | D 638 |
| Tensile Elongation | 1.5 - 2.5 % | 1.5 - 2.5 % | D 638 |
| Tensile Modulus | 1.70 x 10 ⁶ psi | 11722 MPa | D 638 |
| Flexural Strength | 33000 psi | 228 MPa | D 790 |
| Flexural Modulus | 1.50 x 10 ⁶ psi | 10342 MPa | D 790 |
| Hardness | | | |
| Rockwell, R | 119 | 119 | D 785 |

ELECTRICAL

| | | | |
|----------------------------------|---------------|---------------|-------|
| Dielectric Strength, S/T, in oil | 450 VPM | 17.7 kV/mm | D 149 |
| Dielectric Constant, 1 MHz, Dry | 3.5 | 3.5 | D 150 |
| Dissipation Factor, 1 MHz, Dry | 0.0060 | 0.0060 | D 150 |
| Volume Resistivity | > 1E16 ohm.cm | > 1E16 ohm.cm | D 257 |

THERMAL

| | | | |
|------------------------|---------------|--------------|-------|
| Deflection Temperature | | | |
| @ 264 psi (1820 kPa) | 300 °F | 149 °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 |

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.

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This information is intended to be used only as a guideline for designers and processors of modified thermoplastics. Because design and processing is complex, a set solution will not solve all problems. Observation on a "trial and error" basis may be required to achieve desired results.

Data are obtained from specimens molded under carefully controlled conditions from representative samples of the compound described herein. Properties may be materially affected by molding techniques applied and by the size and shape of the item molded. No assurance can be implied that all molded articles will have the same properties as those listed.

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