



**Product Data Sheet &  
General Processing Conditions**

**RTP 305 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                | 30 %                  | 30 %          |           |
| Specific Gravity                | 1.43                  | 1.43          | D 792     |
| Molding Shrinkage               |                       |               |           |
| 1/8 in (3.2 mm) section         | 0.0010 - 0.0030 in/in | 0.10 - 0.30 % | 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   | 3.0 ft-lbs/in              | 160 J/m     | D 256  |
| unnotched 1/8 in (3.2 mm) section | 15.0 ft-lbs/in             | 801 J/m     | D 4812 |
| Tensile Strength                  | 18000 psi                  | 124 MPa     | D 638  |
| Tensile Elongation                | 2.5 - 3.5 %                | 2.5 - 3.5 % | D 638  |
| Tensile Modulus                   | 1.30 x 10 <sup>6</sup> psi | 8964 MPa    | D 638  |
| Flexural Strength                 | 27000 psi                  | 186 MPa     | D 790  |
| Flexural Modulus                  | 1.20 x 10 <sup>6</sup> psi | 8274 MPa    | D 790  |
| Hardness                          |                            |             |        |
| Rockwell, R                       | 119                        | 119         | D 785  |

**ELECTRICAL**

|                                  |               |               |       |
|----------------------------------|---------------|---------------|-------|
| Dielectric Strength, S/T, in oil | 460 VPM       | 18.1 kV/mm    | D 149 |
| Dielectric Constant, 1 MHz, Dry  | 3.4           | 3.4           | D 150 |
| Dissipation Factor, 1 MHz, Dry   | 0.0070        | 0.0070        | D 150 |
| Volume Resistivity               | > 1E16 ohm.cm | > 1E16 ohm.cm | D 257 |

**THERMAL**

|                        |               |              |       |
|------------------------|---------------|--------------|-------|
| Deflection Temperature |               |              |       |
| @ 264 psi (1820 kPa)   | 295 °F        | 146 °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**

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Desiccant Type Dryer Required.