



**Product Data Sheet &  
General Processing Conditions**

**RTP 2381 C  
Rigid Thermoplastic Polyurethane (RTPU)  
Carbon Fiber**

**PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS**

| <b>PERMANENCE</b>                            | <b>English</b>        | <b>SI Metric</b> | <b>ASTM<br/>TEST</b> |
|----------------------------------------------|-----------------------|------------------|----------------------|
| Primary Additive                             | 10 %                  | 10 %             |                      |
| Specific Gravity                             | 1.23                  | 1.23             | D 792                |
| Molding Shrinkage<br>1/8 in (3.2 mm) section | 0.0010 - 0.0030 in/in | 0.10 - 0.30 %    | D 955                |

**MECHANICAL**

|                                                          |                            |             |        |
|----------------------------------------------------------|----------------------------|-------------|--------|
| Impact Strength, Izod<br>notched 1/8 in (3.2 mm) section | 1.4 ft-lbs/in              | 75 J/m      | D 256  |
| unnotched 1/8 in (3.2 mm) section                        | 7.0 ft-lbs/in              | 374 J/m     | D 4812 |
| Tensile Strength                                         | 21000 psi                  | 145 MPa     | D 638  |
| Tensile Elongation                                       | 4.0 - 7.0 %                | 4.0 - 7.0 % | D 638  |
| Tensile Modulus                                          | 1.00 x 10 <sup>6</sup> psi | 6895 MPa    | D 638  |
| Flexural Strength                                        | 30000 psi                  | 207 MPa     | D 790  |
| Flexural Modulus                                         | 1.00 x 10 <sup>6</sup> psi | 6895 MPa    | D 790  |

**THERMAL**

|                      |              |             |       |
|----------------------|--------------|-------------|-------|
| Ignition Resistance* |              |             |       |
| Flammability**       | HB @ 1/16 in | HB @ 1.5 mm | D 635 |

**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**

|                    | <b>English</b>     | <b>SI Metric</b>   |
|--------------------|--------------------|--------------------|
| Injection Pressure | 10000 - 15000 psi  | 69 - 103 MPa       |
| Melt Temperature   | 460 - 500 °F       | 238 - 260 °C       |
| Mold Temperature   | 200 - 250 °F       | 93 - 121 °C        |
| Drying             | 4 - 6 hrs @ 270 °F | 4 - 6 hrs @ 132 °C |
| Moisture Content   | 0.01 %             | 0.01 %             |
| Dew Point          | -40 °F             | -40 °C             |

**PROCESSING NOTES**

Desiccant Type Dryer Required.