



## Product Data Sheet & General Processing Conditions

### RTP 2299 X 115092 A Polyetheretherketone (PEEK) Carbon Nanotube Electrically Conductive ESD Protection High Purity

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

| PERMANENCE                                   | English               | SI Metric     | ASTM TEST |
|----------------------------------------------|-----------------------|---------------|-----------|
| Specific Gravity                             | 1.32                  | 1.32          | D 792     |
| Molding Shrinkage<br>1/8 in (3.2 mm) section | 0.0120 - 0.0180 in/in | 1.20 - 1.80 % | D 955     |

#### MECHANICAL

|                                   |                            |          |        |
|-----------------------------------|----------------------------|----------|--------|
| Impact Strength, Izod             |                            |          |        |
| notched 1/8 in (3.2 mm) section   | 0.7 ft-lbs/in              | 37 J/m   | D 256  |
| unnotched 1/8 in (3.2 mm) section | 7.0 ft-lbs/in              | 374 J/m  | D 4812 |
| Tensile Strength                  | 13800 psi                  | 95 MPa   | D 638  |
| Tensile Elongation                | 2.0 %                      | 2.0 %    | D 638  |
| Tensile Modulus                   | 0.70 x 10 <sup>6</sup> psi | 4826 MPa | D 638  |
| Flexural Strength                 | 26000 psi                  | 179 MPa  | D 790  |
| Flexural Modulus                  | 0.60 x 10 <sup>6</sup> psi | 4137 MPa | D 790  |

#### ELECTRICAL

|                     |                  |                  |                    |
|---------------------|------------------|------------------|--------------------|
| Volume Resistivity  | 1E1 - 1E3 ohm.cm | 1E1 - 1E3 ohm.cm | D 257              |
| Surface Resistivity | 1E4 - 1E5 ohm/sq | 1E4 - 1E5 ohm/sq | D 257              |
| Surface Resistance  | 1E3 - 1E4 ohm    | 1E3 - 1E4 ohm    | ESD STM11.11       |
| Static Decay        | < 2.00 s         | < 2.00 s         | FTMS101C<br>4046.1 |

#### 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.

#### GENERAL PROCESSING FOR INJECTION MOLDING

|                    | English           | SI Metric      |
|--------------------|-------------------|----------------|
| Injection Pressure | 12000 - 18000 psi | 83 - 124 MPa   |
| Melt Temperature   | 660 - 750 °F      | 349 - 399 °C   |
| Mold Temperature   | 325 - 425 °F      | 163 - 218 °C   |
| Drying             | 3 hrs @ 300 °F    | 3 hrs @ 149 °C |
| Moisture Content   | 0.10 %            | 0.10 %         |
| Dew Point          | -20 °F            | -29 °C         |

#### PROCESSING NOTES

Desiccant Type Dryer Required.