



## Product Data Sheet & General Processing Conditions

### RTP 383 HEC Polycarbonate (PC) Nickel-Coated Carbon Fiber EMI/RFI Shielding Electrically Conductive

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

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	20 %	20 %	
Specific Gravity	1.33	1.33	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0010 - 0.0020 in/in	0.10 - 0.20 %	D 955

#### MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	1.3 ft-lbs/in	69 J/m	D 256
unnotched 1/8 in (3.2 mm) section	10.0 ft-lbs/in	534 J/m	D 4812
Tensile Strength	19500 psi	134 MPa	D 638
Tensile Elongation	2.3 %	2.3 %	D 638
Tensile Modulus	1.40 x 10 <sup>6</sup> psi	9653 MPa	D 638
Flexural Strength	27500 psi	190 MPa	D 790
Flexural Modulus	1.30 x 10 <sup>6</sup> psi	8964 MPa	D 790

#### ELECTRICAL

Volume Resistivity	< 1E0 ohm.cm	< 1E0 ohm.cm	D 257
Surface Resistivity	< 1E4 ohm/sq	< 1E4 ohm/sq	D 257
Surface Resistance	< 1E3 ohm	< 1E3 ohm	ESD STM11.11
Static Decay MIL-PRF-81705D, 5kV to 50 V, 12% RH	< 0.50 s	< 0.50 s	FTMS101C 4046.1

#### THERMAL

Deflection Temperature @ 264 psi (1820 kPa)	288 °F	142 °C	D 648
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#### EMI

Shielding Effectiveness @ 2 mm thickness	75 dB @ 300 MHz	75 dB @ 300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	79 dB @ 500 MHz	79 dB @ 500 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	83 dB @ 700 MHz	83 dB @ 700 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	86 dB @ 1000 MHz	86 dB @ 1000 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	88 dB @ 1300 MHz	88 dB @ 1300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	91 dB @ 1500 MHz	91 dB @ 1500 MHz	D 4935

#### 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	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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Remove hopper magnets.  
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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