



**Product Data Sheet &
General Processing Conditions**

**RTP 681 HEC FR
Acrylonitrile Butadiene Styrene
(ABS)
Nickel-Coated Carbon Fiber
Electrically Conductive
EMI/RFI Shielding
Flame Retardant**

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	10 %	10 %	
Specific Gravity	1.31	1.31	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0015 - 0.0025 in/in	0.15 - 0.25 %	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	4.0 ft-lbs/in	214 J/m	D 4812
Tensile Strength	9000 psi	62 MPa	D 638
Tensile Elongation	1.6 %	1.6 %	D 638
Tensile Modulus	0.90 x 10 ⁶ psi	6206 MPa	D 638
Flexural Strength	14000 psi	97 MPa	D 790
Flexural Modulus	0.80 x 10 ⁶ psi	5516 MPa	D 790

ELECTRICAL

Volume Resistivity	< 1E1 ohm.cm	< 1E1 ohm.cm	D 257
Surface Resistance	< 1E4 ohm	< 1E4 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

Ignition Resistance* Flammability**	V-0 @ 1/16 in	V-0 @ 1.5 mm	D 3801
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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

	English	SI Metric
Injection Pressure	10000 - 15000 psi	69 - 103 MPa
Melt Temperature	400 - 460 °F	204 - 238 °C
Mold Temperature	145 - 185 °F	63 - 85 °C
Drying	2 hrs @ 180 °F	2 hrs @ 82 °C
Moisture Content	0.10 %	0.10 %
Dew Point	0 °F	-18 °C

PROCESSING NOTES

Remove hopper magnets.

Desiccant Type Dryer Required.