



## Product Data Sheet & General Processing Conditions

### EMI 263 Nylon 6/6 (PA) Stainless Steel Fiber Electrically Conductive EMI/RFI Shielding

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

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	20 %	20 %	
Specific Gravity	1.36	1.36	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0060 - 0.0120 in/in	0.60 - 1.20 %	D 955

#### MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	1.0 ft-lbs/in	53 J/m	D 256
unnotched 1/8 in (3.2 mm) section	12.0 ft-lbs/in	641 J/m	D 4812
Tensile Strength	12000 psi	83 MPa	D 638
Tensile Elongation	2.0 - 6.0 %	2.0 - 6.0 %	D 638
Tensile Modulus	0.60 x 10 <sup>6</sup> psi	4137 MPa	D 638
Flexural Strength	20000 psi	138 MPa	D 790
Flexural Modulus	0.60 x 10 <sup>6</sup> psi	4137 MPa	D 790

#### ELECTRICAL

Volume Resistivity	< 0 ohm.cm	< 0 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)	175 °F	79 °C	D 648
Thermal Conductivity Through-plane	2.70 (BTU.in)/(hr.ft <sup>2</sup> .°F)	0.39 W/(m.K)	E 1530

#### EMI

Shielding Effectiveness @ 2 mm thickness	89 dB @ 300 MHz	89 dB @ 300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	88 dB @ 500 MHz	88 dB @ 500 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	92 dB @ 700 MHz	92 dB @ 700 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	94 dB @ 1000 MHz	94 dB @ 1000 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	97 dB @ 1300 MHz	97 dB @ 1300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	98 dB @ 1500 MHz	98 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	485 - 560 °F	252 - 293 °C

Mold Temperature  
Drying  
Moisture Content

175 - 210 °F  
4 hrs @ 175 °F  
0.20 %

79 - 99 °C  
4 hrs @ 79 °C  
0.20 %

## PROCESSING NOTES

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Use a reverse barrel profile. Remove hopper magnets. Allow 4 - 5 shots to properly disperse the conductive fibers. The surface finish should have a silver streaking appearance, not clumps.  
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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