



## Product Data Sheet & General Processing Conditions

### EMI 162 Polypropylene (PP) Stainless Steel Fiber Electrically Conductive EMI/RFI/ESD Protection

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

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	15 %	15 %	
Specific Gravity	1.04	1.04	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0150 - 0.0250 in/in	1.50 - 2.50 %	D 955

#### MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	5.0 ft-lbs/in	267 J/m	D 256
unnotched 1/8 in (3.2 mm) section	15.0 ft-lbs/in	801 J/m	D 4812
Tensile Strength	3200 psi	22 MPa	D 638
Tensile Elongation	> 10.0 %	> 10.0 %	D 638
Tensile Modulus	0.22 x 10 <sup>6</sup> psi	1517 MPa	D 638
Flexural Strength	4200 psi	29 MPa	D 790
Flexural Modulus	0.20 x 10 <sup>6</sup> psi	1379 MPa	D 790

#### ELECTRICAL

Volume Resistivity	1E-2 - 1E0 ohm.cm	1E-2 - 1E0 ohm.cm	D 257
Surface Resistivity	1E2 - 1E4 ohm/sq	1E2 - 1E4 ohm/sq	D 257
Surface Resistance	1E1 - 1E3 ohm	1E1 - 1E3 ohm	ESD STM11.11
Static Decay MIL-PRF-81705D, 5kV to 50 V, 12% RH	< 2.00 s	< 2.00 s	FTMS101C 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	10000 - 15000 psi	69 - 103 MPa
Melt Temperature	380 - 430 °F	193 - 221 °C
Mold Temperature	100 - 125 °F	38 - 52 °C
Drying	2 hrs @ 175 °F	2 hrs @ 79 °C
Moisture Content	0.10 %	0.10 %

#### PROCESSING NOTES

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.  
Remove hopper magnets.

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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