



Product Data Sheet & General Processing Conditions

EMI 660.5 Acrylonitrile Butadiene Styrene (ABS) Stainless Steel Fiber Electrically Conductive EMI/RFI/ESD Protection

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	5 %	5 %	
Specific Gravity	1.09	1.09	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0050 - 0.0070 in/in	0.50 - 0.70 %	D 955

MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	1.5 ft-lbs/in	80 J/m	D 256
unnotched 1/8 in (3.2 mm) section	8.0 ft-lbs/in	427 J/m	D 4812
Tensile Strength	5900 psi	41 MPa	D 638
Tensile Elongation	4.0 - 8.0 %	4.0 - 8.0 %	D 638
Tensile Modulus	0.33 x 10 ⁶ psi	2275 MPa	D 638
Flexural Strength	10300 psi	71 MPa	D 790
Flexural Modulus	0.34 x 10 ⁶ psi	2344 MPa	D 790

ELECTRICAL

Volume Resistivity	< 2 ohm.cm	< 2 ohm.cm	D 257
Surface Resistivity	< 1E5 ohm/sq	< 1E5 ohm/sq	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**	HB @ 1/16 in	HB @ 1.5 mm	D 635

EMI

Shielding Effectiveness @ 2 mm thickness	32 dB @ 300 MHz	32 dB @ 300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	30 dB @ 500 KHz	30 dB @ 500 KHz	D 4935
Shielding Effectiveness @ 2 mm thickness	31 dB @ 700 MHz	31 dB @ 700 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	32 dB @ 1000 MHz	32 dB @ 1000 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	32 dB @ 1300 MHz	32 dB @ 1300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	33 dB @ 1500 MHz	33 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.

* 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
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Injection Pressure	10000 - 15000 psi	69 - 103 MPa
Melt Temperature	400 - 475 °F	204 - 246 °C
Mold Temperature	150 - 180 °F	66 - 82 °C
Drying	2 hrs @ 180 °F	2 hrs @ 82 °C
Moisture Content	0.10 %	0.10 %
Dew Point	0 °F	-18 °C

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.

Desiccant Type Dryer Required.

For best results use lowest possible screw RPM.

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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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