Product Data Sheet &
General Processing Conditions

EMI 331 E FR
Polycarbonate (PC)
10% Glass Fiber
Stainless Steel Fiber
Electrically Conductive
EMI/RFI/ESD Protection
Flame Retardant

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	10 %	10 %	
Specific Gravity	1.50	1.50	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0030 in/in	0.30 %	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	10.0 ft-lbs/in	534 J/m	D 4812
Tensile Strength	13000 psi	90 MPa	D 638
Tensile Elongation	3.0 %	3.0 %	D 638
Tensile Modulus	0.75 x 10^6 psi	5171 MPa	D 638
Flexural Strength	21000 psi	145 MPa	D 790
Flexural Modulus	0.72 x 10^6 psi	4964 MPa	D 790
ELECTRICAL			
Volume Resistivity	< 10 ohm.cm	< 10 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	< 2.00 s	< 2.00 s	FTMS101C 4046.1
THERMAL			
Ignition Resistance*			
Flammability	V-0 @ 1/16 in	V-0 @ 1.5 mm	UL94
EMI			
Shielding Effectiveness @ 2 mm thickness	43 dB @ 300 MHz	43 dB @ 300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	42 dB @ 500 MHz	42 dB @ 500 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	44 dB @ 700 MHz	44 dB @ 700 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	46 dB @ 1000 MHz	46 dB @ 1000 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	49 dB @ 1300 MHz	49 dB @ 1300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	52 dB @ 1500 MHz	52 dB @ 1500 MHz	D 4935
Shielding Effectiveness @ 3 mm thickness	53 dB @ 300 MHz	53 dB @ 300 MHz	D 4935
Shielding Effectiveness @ 3 mm thickness	52 dB @ 500 MHz	52 dB @ 500 MHz	D 4935
Shielding Effectiveness @ 3 mm thickness	56 dB @ 700 MHz	56 dB @ 700 MHz	D 4935
Shielding Effectiveness @ 3 mm thickness	60 dB @ 1000 MHz	60 dB @ 1000 MHz	D 4935
Shielding Effectiveness @ 3 mm thickness	61 dB @ 1300 MHz	61 dB @ 1300 MHz	D 4935
Shielding Effectiveness @ 3 mm thickness	61 dB @ 1500 MHz	61 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.

GENERAL PROCESSING FOR INJECTION MOLDING

	English	SI Metric
Injection Pressure	10000 - 15000 psi	69 - 103 MPa
Melt Temperature	530 - 580 °F	277 - 304 °C
Mold Temperature	160 - 250 °F	71 - 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

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.
Desiccant Type Dryer Required.