




## Product Data Sheet & General Processing Conditions

**ESD C 280 FR**  
**Nylon 6/6 (PA)**  
**Carbon Fiber**  
**Flame Retardant**  
**ESD Protection**  
**Electrically Conductive**



### PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Specific Gravity	1.47	1.47	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0010 - 0.0020 in/in	0.10 - 0.20 %	D 955

### MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	1.7 ft-lbs/in	91 J/m	D 256
unnotched 1/8 in (3.2 mm) section	11.0 ft-lbs/in	587 J/m	D 4812
Tensile Strength	24000 psi	165 MPa	D 638
Tensile Elongation	2.0 - 3.0 %	2.0 - 3.0 %	D 638
Tensile Modulus	1.90 x 10 <sup>6</sup> psi	13100 MPa	D 638
Flexural Strength	35000 psi	241 MPa	D 790
Flexural Modulus	1.65 x 10 <sup>6</sup> psi	11377 MPa	D 790

### ELECTRICAL

Volume Resistivity	< 1E3 ohm.cm	< 1E3 ohm.cm	D 257
Surface Resistivity	< 1E6 ohm/sq	< 1E6 ohm/sq	D 257
Surface Resistance	< 1E5 ohm	< 1E5 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)	421 °F	216 °C	D 648
Ignition Resistance*			
Flammability	V-0 @ 1/16 in	V-0 @ 1.5 mm	UL94

### EMI

Shielding Effectiveness @ 2 mm thickness	30 dB @ 30 MHz	30 dB @ 30 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	30 dB @ 150 MHz	30 dB @ 150 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	30 dB @ 300 MHz	30 dB @ 300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	29 dB @ 500 MHz	29 dB @ 500 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	29 dB @ 700 MHz	29 dB @ 700 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	29 dB @ 1000 MHz	29 dB @ 1000 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	30 dB @ 1300 MHz	30 dB @ 1300 MHz	D 4935
Shielding Effectiveness @ 2 mm thickness	32 dB @ 1500 MHz	32 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 - 18000 psi	69 - 124 MPa
Melt Temperature	530 - 570 °F	277 - 299 °C
Mold Temperature	150 - 225 °F	66 - 107 °C
Drying	4 hrs @ 175 °F	4 hrs @ 79 °C
Moisture Content	0.20 %	0.20 %
Dew Point	0 °F	-18 °C

**PROCESSING NOTES**

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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