



Product Data Sheet & General Processing Conditions

ESD C 280 H Impact-Modified Nylon 6/6 (PA) Carbon Fiber ESD Protection Electrically Conductive

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE | English | SI Metric | ASTM TEST |
|--|-----------------------|---------------|-----------|
| Specific Gravity | 1.14 | 1.14 | D 792 |
| Molding Shrinkage 1/8 in (3.2 mm) section | 0.0020 - 0.0040 in/in | 0.20 - 0.40 % | D 955 |

MECHANICAL

| | | | |
|--|----------------------------|-------------|--------|
| Impact Strength, Izod notched 1/8 in (3.2 mm) section | 2.5 ft-lbs/in | 133 J/m | D 256 |
| unnotched 1/8 in (3.2 mm) section | 12.0 ft-lbs/in | 641 J/m | D 4812 |
| Tensile Strength | 16000 psi | 110 MPa | D 638 |
| Tensile Elongation | 3.0 - 5.0 % | 3.0 - 5.0 % | D 638 |
| Tensile Modulus | 1.20 x 10 ⁶ psi | 8274 MPa | D 638 |
| Flexural Strength | 24000 psi | 165 MPa | D 790 |
| Flexural Modulus | 0.90 x 10 ⁶ psi | 6206 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 | < 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 - 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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