



Product Data Sheet & General Processing Conditions

PermaStat PLUS® 4500 Aliphatic Polyketone (PK) ESD Protection Permanently Static Dissipative

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Specific Gravity	1.21	1.21	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0180 - 0.0250 in/in	1.80 - 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	No Break	No Break	D 4812
Tensile Strength	4800 psi	33 MPa	D 638
Tensile Elongation	> 10.0 %	> 10.0 %	D 638
Tensile Modulus	0.10 x 10 ⁶ psi	690 MPa	D 638
Flexural Strength	4500 psi	31 MPa	D 790
Flexural Modulus	0.13 x 10 ⁶ psi	896 MPa	D 790

ELECTRICAL

Volume Resistivity	1E7 - 9.9E8 ohm.cm	1E7 - 9.9E8 ohm.cm	D 257
Surface Resistivity	1E8 - 9.9E9 ohm/sq	1E8 - 9.9E9 ohm/sq	D 257
Surface Resistance	1E7 - 9.9E8 ohm	1E7 - 9.9E8 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)	112 °F	44 °C	D 648
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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	450 - 500 °F	232 - 260 °C
Mold Temperature	125 - 200 °F	52 - 93 °C
Drying	4 hrs @ 200 °F	4 hrs @ 93 °C
Moisture Content	< 0.05 %	< 0.05 %
Dew Point	-22 °F	-30 °C

PROCESSING NOTES

Do not exceed 520 °F (270 °C) melt temperature.

Desiccant Type Dryer Required.

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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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