



**Product Data Sheet &
General Processing Conditions**

PermaStat® 1800 A FR
Polycarbonate/Acrylic Alloy (PC/PMMA)
Flame Retardant
Permanently Anti-static
ESD Protection
UL94 V-0



PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Specific Gravity	1.29	1.29	D 792
Molding Shrinkage 1/8 in (3.2 mm) section	0.0040 - 0.0070 in/in	0.40 - 0.70 %	D 955

MECHANICAL

Impact Strength, Izod notched 1/8 in (3.2 mm) section	16.0 ft-lbs/in	854 J/m	D 256
unnotched 1/8 in (3.2 mm) section	No Break	No Break	D 4812
Tensile Strength	6000 psi	41 MPa	D 638
Tensile Elongation	> 10.0 %	> 10.0 %	D 638
Tensile Modulus	0.25 x 10 ⁶ psi	1724 MPa	D 638
Flexural Strength	9500 psi	66 MPa	D 790
Flexural Modulus	0.30 x 10 ⁶ psi	2068 MPa	D 790

ELECTRICAL

Volume Resistivity	1.0E9 - 9.9E10 ohm.cm	1.0E9 - 9.9E10 ohm.cm	D 257
Surface Resistivity	1.0E10 - 9.9E11 ohm/sq	1.0E10 - 9.9E11 ohm/sq	D 257
Surface Resistance	1.0E9 - 9.9E10 ohm	1.0E9 - 9.9E10 ohm	ESD STM11.11
Static Decay			ESD STM11.11
MIL-PRF-81705D, 5kV to 50 V, 12% RH	< 2.00 s	< 2.00 s	FTMS101C 4046.1

THERMAL

Deflection Temperature @ 66 psi (455 kPa)	215 °F	102 °C	D 648
Ignition Resistance*			
Flammability	V-0 @ 1/16 in	V-0 @ 1.5 mm	UL94

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	400 - 480 °F	204 - 249 °C
Mold Temperature	100 - 150 °F	38 - 66 °C
Drying	3 - 6 hrs @ 180 °F	3 - 6 hrs @ 82 °C
Moisture Content	0.02 %	0.02 %
Dew Point	0 °F	-18 °C

PROCESSING NOTES

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

Desiccant Type Dryer Required.