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**Product Data Sheet &  
General Processing Conditions**

**PermaStat® 1800 A  
Polycarbonate/Acrylic Alloy (PC/PMMA)  
Permanently Anti-static  
ESD Protection**

**PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS**

| PERMANENCE                                   | English               | SI Metric     | ASTM TEST |
|----------------------------------------------|-----------------------|---------------|-----------|
| Specific Gravity                             | 1.15                  | 1.15          | D 792     |
| Molding Shrinkage<br>1/8 in (3.2 mm) section | 0.0050 - 0.0080 in/in | 0.50 - 0.80 % | D 955     |

**MECHANICAL**

|                                   |                            |          |        |
|-----------------------------------|----------------------------|----------|--------|
| Impact Strength, Izod             |                            |          |        |
| notched 1/8 in (3.2 mm) section   | 25.0 ft-lbs/in             | 1335 J/m | D 256  |
| unnotched 1/8 in (3.2 mm) section | No Break                   | No Break | D 4812 |
| Tensile Strength                  | 6100 psi                   | 42 MPa   | D 638  |
| Tensile Elongation                | > 10.0 %                   | > 10.0 % | D 638  |
| Tensile Modulus                   | 0.28 x 10 <sup>6</sup> psi | 1931 MPa | D 638  |
| Flexural Strength                 | 10000 psi                  | 69 MPa   | D 790  |
| Flexural Modulus                  | 0.28 x 10 <sup>6</sup> psi | 1931 MPa | D 790  |

**ELECTRICAL**

|                                     |                      |                      |                    |
|-------------------------------------|----------------------|----------------------|--------------------|
| Volume Resistivity                  | 1E9 - 9.9E10 ohm.cm  | 1E9 - 9.9E10 ohm.cm  | D 257              |
| Surface Resistivity                 | 1E10 - 9.9E11 ohm/sq | 1E10 - 9.9E11 ohm/sq | D 257              |
| Surface Resistance                  | 1E9 - 9.9E10 ohm     | 1E9 - 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<br>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 - 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.