

RTP Company PermaStat® 1800 MD Acrylic (PMMA); Permanently Anti-static - ESD Protection - Transparent Grade

Categories: [Polymer](#); [Thermoplastic](#); [Acrylic \(PMMA\)](#)

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| Physical Properties | Metric | English | Comments |
|-----------------------|---|--|------------|
| Specific Gravity | 1.15 g/cc | 1.15 g/cc | ASTM D 792 |
| Linear Mold Shrinkage | 0.0050 - 0.0070 cm/cm @Thickness 3.20 mm | 0.0050 - 0.0070 in/in @Thickness 0.126 in | ASTM D 955 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------------------------------|--------------------------------------|-------------|
| Tensile Strength at Break | 37.9 MPa | 5500 psi | ASTM D 638 |
| Elongation at Break | >= 10 % | >= 10 % | ASTM D 638 |
| Tensile Modulus | 1.38 GPa | 200 ksi | ASTM D 638 |
| Flexural Strength | 58.6 MPa | 8500 psi | ASTM D 790 |
| Flexural Modulus | 1.72 GPa | 250 ksi | ASTM D 790 |
| Izod Impact, Notched | 0.534 J/cm @Thickness 3.20 mm | 1.00 ft-lb/in @Thickness 0.126 in | ASTM D 256 |
| Izod Impact, Unnotched | 8.01 J/cm @Thickness 3.20 mm | 15.0 ft-lb/in @Thickness 0.126 in | ASTM D 4812 |

| Electrical Properties | Metric | English | Comments |
|--------------------------------|---------------------------|---------------------------|---|
| Volume Resistivity | 1.00e+9 - 9.90e+10 ohm-cm | 1.00e+9 - 9.90e+10 ohm-cm | ASTM D 257 |
| Surface Resistance | 1.00e+9 - 9.90e+10 ohm | 1.00e+9 - 9.90e+10 ohm | ESD STM11.11 |
| Surface Resistivity per Square | 1.00e+10 - 9.90e+11 ohm | 1.00e+10 - 9.90e+11 ohm | ASTM D 257 |
| Static Decay | <= 2.0 sec | <= 2.0 sec | MIL-PRF-81705D, 5kV to 50 V, 12% RH; FTMS101C; 4046.1 |

| Optical Properties | Metric | English | Comments |
|-----------------------|--------|---------|---------------------------------------|
| Transmission, Visible | 90 % | 90 % | transparent; thickness not quantified |

| Processing Properties | Metric | English | Comments |
|-----------------------|----------------------------|---------------------------|----------|
| Melt Temperature | 213 - 243 °C | 415 - 470 °F | |
| Mold Temperature | 37.8 - 65.6 °C | 100 - 150 °F | |
| Drying Temperature | 93.3 °C @Time 14400 sec | 200 °F @Time 4.00 hour | |
| Moisture Content | 0.020 % | 0.020 % | |
| Dew Point | -17.8 °C | 0.000 °F | |
| Injection Pressure | 68.9 - 103 MPa | 10000 - 15000 psi | |

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.