

RTP Company PermaStat® 1800 MD Acrylic (PMMA) D Protection - Transparent Grade

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

Vendors: [Click here to view all available suppliers for this material.](#)

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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.