

Schenectady Lab  
 PO Box 724  
 2210 Technology Drive  
 Schenectady, NY 12301  
 Tel: 518.382.0082  
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## The M&P Lab

e-mail: [info@the-mandp-lab.com](mailto:info@the-mandp-lab.com)  
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Greenville Lab  
 Suite L  
 481 Garlington Road  
 Greenville, SC 29615  
 Tel: 864.297.4417  
 Fax: 864.297.4517

### CURRENT SELECTED PHYSICAL TESTS OF PLASTICS AND METALS OFFERED BY THE M&P LAB

Test	Method or Range	Ambient	Controlled Temperature
<b>Electrical Tests</b>			
Arc resistance	ASTM D 495	Yes	n/a
Capacitance	20 Hz to 1 MHz	Yes	to 260 °C
Dielectric breakdown	to 150 kV, 400 ma	Air	to 260 °C
Dielectric breakdown	to 150 kV, 400 ma	Oil	to 100 °C
Dielectric constant	ASTM D 150, etc	Yes	to 260 °C
Dissipation factor	ASTM D 150, etc	Yes	to 260 °C
Electric strength	to 150 kV, 400 ma	Air	to 260 °C
Electric strength	to 150 kV, 400 ma	Oil	to 100 °C
Inductance	Various	Yes	to 260 °C
Insulation resistance	Various	Yes	to 300 °C
Resistance	ASTM D 257	Yes	to 300 °C
Surface resistivity	ASTM D 257	Yes	to 300 °C
Volume resistivity	ASTM D 257	Yes	to 300 °C
<b>Mechanical Tests, Plastics</b>			
Compression	ASTM D 695	Yes	n/a
Deformation	ASTM D 621	Yes	n/a
Density	ASTM D 792	Yes	n/a
Flexural strength	ASTM D 790	Yes	to 300 °C
Hardness	ASTM D 785	Yes	n/a
Shear strength	ASTM D 2344	Yes	to 360 °C
Tensile strength and elongation	ASTM D 638	Yes	to 360 °C

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Test	Method or Range	Ambient	Controlled Temperature
<b>Mechanical Tests, Metals</b>			
Charpy impact	ASTM E 23	Yes	n/a
Creep	ASTM E 139	n/a	to 982 °C
Density	ASTM D 792	Yes	n/a
Fatigue	ASTM E 466	n/a	to 982 °C
Hardness, Brinell	ASTM E 110	Yes	n/a
Hardness, Knoop	ASTM E 384	Yes	n/a
Hardness, Rockwell	ASTM E 18	Yes	n/a
Hardness, Vickers	ASTM E 92	Yes	n/a
Rupture	ASTM E 139	n/a	to 982 °C
Tensile strength and elongation	ASTM E 8, E 21	Yes	to 982 °C
Tensile strength and elongation, foils	IPC TM 2.4.18	Yes	to 300 °C
<b>Controlled Environment Tests</b>			
Thermal aging, air	UL 746B	n/a	to 300 °C
Thermal, programmed temperature cycling	Air	n/a	30 to 300 °C
Thermal stress	Fluidized sand	n/a	to 600 °C
Thermal stress	Solder	n/a	to 300 °C
Water absorption	IPC TM 2.6.2.1A, etc	n/a	n/a