

## Technical Data Sheets


### Durez<sup>®</sup> 118 Phenolic, Injection Grade

**Subcategory:** Phenolic; Thermoset;

**Key Words:** Durez<sup>®</sup> 118 Phenolic, Injection Grade;

**Material Notes:** Durez 118 Black Phenolic is a two-stage, asbestos free, general purpose molding material. It exhibits improved impact strength and resistance to flexural fatigue for demanding automotive, electrical and appliance applications. Shrinkage and mechanical strengths are closely controlled to meet part reliability requirements.

<b>Physical Properties</b>	<b>Values</b>	<b>Comments</b>	<b>U.S. / Other Units</b>
Density, g/cc	1.4	ASTM D792	<u>1.4 g/cc</u>
Apparent Bulk Density, g/cc	0.58	ASTM D1895	<u>0.58 g/cc</u>
Linear Mold Shrinkage, cm/cm	0.011	ASTM D955	0.011 in/in
Water Absorption, %	0.5	ASTM D570	0.5 %
<b>Mechanical Properties</b>	<b>Values</b>	<b>Comments</b>	<b>U.S. / Other Units</b>
Tensile Strength, Ultimate, MPa	48	ASTM D638	<u>6,960 psi</u>
Modulus of Elasticity, GPa	8.3	In tension; ASTM D638	<u>1,204 ksi</u>
Flexural Yield Strength, MPa	69		<u>10,005 psi</u>
Impact Strength, Izod, J/cm	0.16	Notched; ASTM D256	<u>0.30 ft-lb/in</u>
Compressive Yield Strength, MPa	207	ASTM D695	<u>30,015 psi</u>
<b>Thermal Properties</b>	<b>Values</b>	<b>Comments</b>	<b>U.S. / Other Units</b>
Deflection Temperature at 1.8 MPa, °C	149	ASTM D648	300 °F
Maximum Service Temperature, Air, °C	150	UL temperature Index	302 °F
Flammability, UL94 (5=V-0; 4=V-1; 3=V-2; 1=HB)	4 (V-1)	V-1 UL 94 at 3 mm.	4
<b>Electrical Properties</b>	<b>Values</b>	<b>Comments</b>	<b>U.S. / Other Units</b>
Electrical Resistivity, Ohm-cm	1E+11	ASTM D257	<u>1E+11 Ohm-cm</u>
Dielectric Constant	5.5	at 1 MHz; ASTM D150	5.5
Dielectric Constant, Low Frequency	9.5	at 1 kHz. ASTM D150	9.5
Dielectric Strength, kV/mm	8.8	Short Time. Step by step value is 6.9 kV/mm. ASTM D149	<u>224 kV/in</u>
Dissipation Factor	0.06	at 1 MHz. ASTM D150	0.06
Dissipation Factor, Low Frequency	0.35	at 1 kHz. ASTM D150	0.35

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