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Durez 118 Black Phenolic is a two-stage, 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.

Plasticities available for compression, transfer, and injection molding.

Form of Material Granular **Feeding & Preforming** Good **Storage Life** One Year

PHENOLIC

Typical Properties		Compression		Injection Grade	
		International Units	English Units	International Units	English Units
Physical	Specific Gravity (D792)	1.40	1.40	1.40	1.40
	Apparent Density (D1895)	0.58 g/cc	0.58 g/cc	0.58 g/cc	0.58 g/cc
	Molding Shrinkage* (D6289)	0.007 m/m	0.007 in/in	0.0110 m/m	0.0110 in/in
	Water Absorption (D570)	0.50 %	0.50 %	0.50 %	0.50 %
Mechanical	Tensile Strength (D638)	55 Mpa	8,000 psi	48 Mpa	7,000 psi
	Flexural Strength (D790)	76 Mpa	11,000 psi	69 Mpa	10,000 psi
	Compressive Strength (D695)	207 Mpa	30,000 psi	207 Mpa	30,000 psi
	Tensile Modulus (D638)	9.6 Gpa	1.4 x10 ⁶ psi	8.3 Gpa	1.2 x10 ⁶ psi
	Izod Impact (D256)	18.1 J/m	0.34 ft lb/in	16.5 J/m	0.31 ft lb/in
Thermal	Deflection Temperature (D648)	171 °C	340 °F	149 °C	300 °F
	UL Flammability (UL-94) @	1.5 mm	HB	1.5 mm	HB
	For complete UL Listing for this material refer to the UL web Site www.ul.com	3.0 mm	V - 1	3.0 mm	V - 1
		6.0 mm	V - 0	6.0 mm	V - 0
Electrical	UL Temperature Index (Elect) @	3.0 mm	150 °C		150 °C
	Dielectric Strength (D149)				
	Short Time	15.7 MV/m	400 V/mil	8.8 MV/m	225 V/mil
	Step by Step	13.8 MV/m	350 V/mil	6.9 MV/m	175 V/mil
	Dissipation Factor (D150)1 MHZ	.05	.05	.06	.06
	Dielectric Constant (D150)1 MHZ	4.7	4.7	5.5	5.5
Volume Resistivity(ohms)(D257)	10.0 x10 ¹⁰ m	10.0 x10 ¹² cm	0.1 x10 ¹⁰ m	0.1 x10 ¹² cm	

Properties determined with test specimens molded at 340-350°F *Typical transfer-molded shrinkage is 0.009 in/in or m/m

Other Properties

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