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Durez 32633 Black Phenolic is a two-stage, glass filled, special purpose molding compound. It is designed for applications requiring high physical strengths, dimensional stability, and heat resistance. Typical applications include small motor and gear housings, brush holders, commutators, and under hood automotive applications.

Plasticities available for compression, transfer, and injection molding.

Form of Material Granular

Feeding & Preforming Fair

Storage Life One Year

PHENOLIC

Typical Properties		Compression		Injection Grade	
		International Units	English Units	International Units	English Units
Physical	Specific Gravity (D792)	1.77	1.77	1.78	1.78
	Apparent Density (D1895)	0.80 g/cc	0.80 g/cc	0.80 g/cc	0.80 g/cc
	Molding Shrinkage* (D6289)	0.0015 m/m	0.0015 in/in	0.0030 m/m	0.0030 in/in
	Water Absorption (D570)	0.05 %	0.05 %	0.05 %	0.05 %
Mechanical	Tensile Strength (D638)	103 Mpa	15,000 psi	138 Mpa	20,000 psi
	Flexural Strength (D790)	138 Mpa	20,000 psi	227 Mpa	33,000 psi
	Compressive Strength (D695)	345 Mpa	50,000 psi	276 Mpa	40,000 psi
	Tensile Modulus (D638)	15.8 Gpa	2.3 x10 ⁶ psi	18.6 Gpa	2.7 x10 ⁶ psi
	Izod Impact (D256)	48.0 J/m	0.90 ft lb/in	40.0 J/m	0.75 ft lb/in
Thermal	Deflection Temperature (D648)	204 °C	400 °F	204 °C	400 °F
	UL Flammability (UL-94) @	1.5 mm	V - 0	1.5 mm	V - 0
	For complete UL Listing for this material refer to the UL web Site www.ul.com	3.0 mm	V - 0	3.0 mm	V - 0
		6.5 mm	V - 0	6.5 mm	V - 0
	UL Temperature Index (Elect) @	3.0 mm	150 °C		150 °C
Electrical	Dielectric Strength (D149)				
	Short Time	17.7 MV/m	450 V/mil	17.7 MV/m	450 V/mil
	Step by Step	15.7 MV/m	400 V/mil	15.7 MV/m	400 V/mil
	Dissipation Factor (D150)1 MHZ	.02	.02	.02	.02
	Dielectric Constant (D150)1 MHZ	4.3	4.3	4.3	4.3
	Volume Resistivity(ohms)(D257)	1.0 x10 ¹⁰ m	1.0 x10 ¹² cm	1.0 x10 ¹⁰ m	1.0 x10 ¹² cm

Properties determined with test specimens molded at 340-350°F *Typical transfer-molded shrinkage is 0.0030in/in or m/m

Other Properties

Compressive Modulus @250°F (psi x 10⁶) 1.53
 Flexural Modulus @73°F (psi x 10⁶) 2.2
 Shear strength (psi) 6870

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