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Durez 31735 is a special purpose phenolic molding compound developed for automotive and industrial pulleys. This material is designed to optimize pulley performance relating to belt life, dimensional tolerance, impact strength, and other properties required in pulley applications.

Plasticities available for compression and transfer 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)	1.43	1.43	1.43	1.43
	Apparent Density (D1895)	0.55 g/cc	0.55 g/cc	0.55 g/cc	0.55 g/cc
	Molding Shrinkage* (D6289)	0.006 m/m	0.006 in/in	0.0090 m/m	0.0090 in/in
	Water Absorption (D570)	0.50 %	0.50 %	0.50 %	0.50 %
Mechanical	Tensile Strength (D638)	55 Mpa	8,000 psi	52 Mpa	7,500 psi
	Flexural Strength (D790)	83 Mpa	12,000 psi	86 Mpa	12,500 psi
	Compressive Strength (D695)	207 Mpa	30,000 psi	207 Mpa	30,000 psi
	Tensile Modulus (D638)	6.9 Gpa	1.0 x10 ⁶ psi	6.9 Gpa	1.0 x10 ⁶ psi
	Izod Impact (D256)	27.8 J/m	0.52 ft lb/in	21.4 J/m	0.40 ft lb/in
Thermal	Deflection Temperature (D648)	177 °C	350 °F	163 °C	325 °F
	UL Flammability (UL-94) @	mm		mm	
	For complete UL Listing for this material refer to the UL web Site www.ul.com	mm		mm	
	UL Temperature Index (Elect) @	3.0 mm	°C		°C
Electrical	Dielectric Strength (D149)				
	Short Time	10.8 MV/m	275 V/mil	12.8 MV/m	325 V/mil
	Step by Step	9.8 MV/m	250 V/mil	11.8 MV/m	300 V/mil
	Dissipation Factor (D150)1 MHZ	.05	.05	.05	.05
	Dielectric Constant (D150)1 MHZ	6.0	6.0	5.1	5.1
	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 0.008 in/in or m/m

Other Properties

Poisson's Ratio 0.33 * Young's Modulus 1.16x10⁶ * Flexural Modulus 1.2x10⁶ * Coefficient of Thermal Conductivity Cal/(Sec)(CM^2)(°C/CM) 8.8x10⁻⁴ Cenco Fitch * Coefficient of Thermal Expansion ASTM D696 Range 30 - 150°C 36.0x10⁻⁶/°C * Specific Heat, Astm C351 0.28 Cal/°C/Gram
 Heat Resistance, 2 Hrs. at Temp. 450°F
 Long Term Heat Test 350°F As Is 1000 Hours
 Flexure (psi) 11,700 6,400
 Tensile (psi) 8,200 5,300

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