## Durez® 31735 (Compression)

## Phenolic

Sumitomo Bakelite North America, Inc.

## Message:

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.

General Information			
Features	Good dimensional stability		
	Impact resistance, good		
Uses	Industrial application		
	Pulley		
	Application in Automobile Field		
Appearance	Black		
Forms	Particles		
Processing Method	Resin transfer molding		
	Compression molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.43	g/cm³	ASTM D792
Apparent Density	0.55	g/cm³	ASTM D1895
Molding Shrinkage - Flow	0.60	%	ASTM D6289
Water Absorption	0.50	%	ASTM D570
Flexural Modulus - Long Term Heat Test			
177°C <sup>1</sup>	80.7	MPa	
177°C <sup>2</sup>	44.1	MPa	
Tensor modulus-Long Term Heat Test			
177°C <sup>3</sup>	36.5	MPa	
177°C <sup>4</sup>	56.5	MPa	
Heat Resistance (232°C)	2.0	hr	
Young's Modulus	8.00	GPa	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6900	MPa	ASTM D638
Tensile Strength	55.0	MPa	ASTM D638
Flexural Modulus	8270	MPa	
Flexural Strength	83.0	MPa	ASTM D790
Compressive Strength	207	MPa	ASTM D695
Poisson's Ratio	0.33		

Impact	Nominal Value	Unit	Test Method	
Notched Izod Impact	28	J/m	ASTM D256	
Thermal	Nominal Value	Unit	Test Method	
Deflection Temperature Under Load (1.8 MPa, Unannealed)	177	°C	ASTM D648	
CLTE - Flow (30 to 150°C)	3.6E-5	cm/cm/°C		
Specific Heat	1170	J/kg/°C		
Thermal Conductivity	0.37	W/m/K		
Electrical	Nominal Value	Unit	Test Method	
Volume Resistivity	1.0E+12	ohms·cm	ASTM D257	
Dielectric Strength			ASTM D149	
5	11	kV/mm	ASTM D149	
6	9.8	kV/mm	ASTM D149	
Dielectric Constant (1 MHz)	6.00		ASTM D2520	
Dissipation Factor (1 MHz)	0.050		ASTM D150	
Thermoset	Nominal Value	Unit		
Shelf Life	52	wk		
Additional Information	Nominal Value	Unit		
Test Specimens Molded at 340-350°FTypical transfer-molded shrinkage is 0.008 in/in				
NOTE				
1.	As Is			
2.	1000 hrs			
3.	1000 hrs			
4.	As Is			
5.	Method A (short time)			
6.	Method B (step by step)			

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