# **RX®** 643

### Phenolic

Sumitomo Bakelite North America, Inc.

## Message:

General Information

RX® 643 is a fiberglass reinforced, ammonia-free, phenolic resole compound, with good dimensional stability and good strength at elevated temperatures. Meets ASTM D-5948 Type GPI-10.

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Filler / Reinforcement	Glass Fiber				
Features	Good Dimensional Stability				
	High Temperature Strength				
Agency Ratings	ASTM D 5948, Type GPI-10				
Appearance	Black				
Forms	Granules				
Processing Method	Compression Molding				
	Injection Molding				
	Resin Transfer Molding				
Physical	Nominal Value	Unit	Test Method		
Specific Gravity	1.75	g/cm³	ASTM D792		
Apparent Density	0.80	g/cm³	ASTM D1895		
Molding Shrinkage - Flow (Compression					
Molded)	0.15	%	ASTM D955		
Water Absorption (24 hr)	0.050	%	ASTM D570		
Water Absorption - 48 hrs	0.30	%	ASTM D570		
Hardness	Nominal Value	Unit	Test Method		
Rockwell Hardness (E-Scale, Compression Molded)	85		ASTM D785		
Mechanical	Nominal Value	Unit	Test Method		
Tensile Strength (Break, Compression Molded)	96.0	MPa	ASTM D638		
Flexural Modulus (Compression Molded)	13800	MPa	ASTM D790		
Flexural Strength (Compression Molded)	186	MPa	ASTM D790		
Compressive Strength	234	MPa	ASTM D695		
Impact	Nominal Value	Unit	Test Method		
Notched Izod Impact (Compression Molded)	59	J/m	ASTM D256A		
Thermal	Nominal Value	Unit	Test Method		
Deflection Temperature Under Load			ASTM D648		
1.8 MPa, Unannealed, Compression Molded	280	°C			

1.8 MPa, Annealed, Compression			
Molded	> 282	°C	
CLTE - Flow	1.3E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.50	W/m/K	ASTM C518
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength <sup>1</sup>			ASTM D149
<sup>2</sup>	14	kV/mm	
3	11	kV/mm	
Arc Resistance	135	sec	ASTM D495
NOTE			
1.	Wet, 60 Hz		
2.	Method A (Short-Time)		
3.	Method B (Step-by-Step)		

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### Recommended distributors for this material

# Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

