

# RX® 647

Phenolic

Sumitomo Bakelite North America, Inc.

## Message:

RX® 647 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-5.

General Information			
Filler / Reinforcement	Glass Fiber		
Features	Good Dimensional Stability		
	High Temperature Strength		
Agency Ratings	ASTM D 5948, Type GPI-5		
Appearance	Black		
Forms	Granules		
Processing Method	Compression Molding		
	Injection Molding		
	Resin Transfer Molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.900	g/cm <sup>3</sup>	ASTM D792
Apparent Density	0.80	g/cm <sup>3</sup>	ASTM D1895
Molding Shrinkage - Flow (Compression Molded)	0.20	%	ASTM D955
Water Absorption (24 hr)	0.040	%	ASTM D570
Water Absorption - 48 hrs	0.20	%	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)	72.0	MPa	ASTM D638
Flexural Modulus (Compression Molded)	15900	MPa	ASTM D790
Flexural Strength (Compression Molded)	152	MPa	ASTM D790
Compressive Strength	241	MPa	ASTM D695

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Compression Molded)	38	J/m	ASTM D256A

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, Compression Molded	276	°C	

1.8 MPa, Annealed, Compression Molded	> 282	°C	
CLTE - Flow	1.4E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.79	W/m/K	ASTM C518
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength <sup>1</sup>			ASTM D149
-- <sup>2</sup>	14	kV/mm	
-- <sup>3</sup>	12	kV/mm	
Arc Resistance	180	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

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