

Sumitomo Bakelite North America RX[®] 448 Cellulose Reinforced Phenolic Novolac

Category : Polymer , Thermoset , Filled/Reinforced Thermoset , Phenolic , Phenolic, Novolac, Cellulose Filled

Material Notes:

RX448 is a cellulose fiber reinforced phenolic novolac molding compound. This material is recommended for large parts requiring moderate toughness. It is designed to meet the requirements of ASTM D-5948-96, Type CFI-5. (Replaces Military Specification MIL-M-14H.) Information supplied by Sumitomo Bakelite North America.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Sumitomo-Bakelite-North-America-RX-448-Cellulose-Reinforced-Phenolic-Novolac.php

Physical Properties	Metric	English	Comments
Bulk Density	0.400 g/cc	0.0145 lb/in ³	Powder; ASTM D1895
Density	1.43 g/cc	0.0517 lb/in ³	ASTM D-792
Water Absorption	0.60 %	0.60 %	24 hour; ASTM D570
	1.5 %	1.5 %	48 hour; ASTM D570
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell E	70	70	ASTM D785
Tensile Strength, Ultimate	48.0 MPa	6960 psi	ASTM D638
Flexural Strength	70.0 MPa	10200 psi	ASTM D790
Flexural Modulus	10.0 GPa	1450 ksi	ASTM D790
Compressive Strength	200 MPa	29000 psi	ASTM D695
Izod Impact, Notched	0.600 J/cm	1.12 ft-lb/in	ASTM D256A

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	47.0 $\mu\text{m/m-}^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	26.1 $\mu\text{in/in-}^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	ASTM E831
CTE, linear, Transverse to Flow	53.0 $\mu\text{m/m-}^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	29.4 $\mu\text{in/in-}^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	ASTM E831
Thermal Conductivity	0.560 W/m-K	3.89 BTU-in/hr-ft ² - $^{\circ}\text{F}$	ASTM C518

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	180 °C	356 °F	As Molded; ASTM D648A
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	3.40 kV/mm	86.4 kV/in	60 Hz, wet, SS; ASTM D149
	5.90 kV/mm	150 kV/in	ST; ASTM D149
Arc Resistance	65 sec	65 sec	ASTM D495

Descriptive Properties	Value	Comments
Available Molding Grades	Compression, Transfer, Injection	
Color	Black	
Form	Pellet	

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