



RX[®] 431

Description

RX[®]431 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-10. (Replaces Military Specification MIL-M-14H.)

Available colors

Black

Available molding grades

Compression, Transfer, Injection

Form

Pellet

PHENOLIC

Properties		International Units		English Units		Method	
Physical	Specific Gravity	1.43		1.43		ASTM D792	
	Apparent (Powder) density	0.4	g/cm ³	3.3	lb/gal	ASTM D1895	
	Molding shrinkage	0.2	%	0.0020	in/in	ASTM D955	
	Post shrinkage	-	%	-	in/in	ASTM D955	
	Water absorption						
	24 hour	0.6	%	0.6	%	ASTM D570	
	48 hour	1.9	%	1.9	%	ASTM D570	
Thermal	Temperature of deflection under load						
		As Molded	180	°C at 1.8 MPa	356	°F at 264 psi	ASTM D648A
		Post Baked	-	°C at 1.8 MPa	-	°F at 264 psi	ASTM D648A
	Thermal Conductivity		0.58	W/mK		W/mK	ASTM C518
	UL Temperature Index		150	°C	302	°F	UL 746B
	UL-flammability		94HB		94HB		UL 94
	3.2 mm	94HB		94HB		UL 94	
	1,6 mm	94HB		94HB		UL 94	
Mechanical	Coefficient of linear thermal expansion						
		parallel	27	10 E-6/°C	15	10 E-6/°F	ASTM E831
		perpendicular	69	10 E-6/°C	38	10 E-6/°F	ASTM E831
	Flexural strength		75	MPa		psi	ASTM D790
	Flexural modulus		11	GPa	1.6	Mpsi	ASTM D790
	Tensile strength		41	MPa	6000	psi	ASTM D638
	Izod impact strength, notched		60	J/m	1.1	ft lb/in	ASTM D256A
Compressive strength		186	MPa	27,000	Psi	ASTM D695	
Rockwell Hardness							
		M Scale	-		-		
	E Scale	75		75		ASTM D785	
Electrical	Dielectric Constant, 1 MHz, wet					ASTM D150	
	Dissipation Factor, 1 MHz, wet					ASTM D150	
	Arc Resistance		60	Seconds	60	Seconds	ASTM D495
	Dielectric strength, 60 Hz, dry	ST	1.6	kV/mm	40	V/mil	ASTM D149
		SS	1.4	kV/mm	35	V/mil	ASTM D149
Tracking resistance		-	V	-	V	ASTM D3638 (IEC 112)	

Properties measured on compression molded ASTM specimens. Values are typical, not statistical minimums.

Contact your Sumitomo Bakelite representative for specifications and post baking recommendations.

ST = short time. SS = step-by-step. Wet = immersed in H₂O for 48 hrs. at 50 °C prior to testing.

Certification to ASTM D-5948 requires batch testing. All testing in accordance with ASTM D-5948. ASTM D-5948 supersedes MIL-M-14.

RoHS: RX[®] 431 is in compliance with RoHS2 (2011/65/EU, Restriction of Hazardous Substances).

PFOS: RX[®] 431 does not contain perfluorooctansulfonate (PFOS) according to European Directive 2006/122/EC.

REACH/SVHC : RX[®] 431 does not contain any Substances of Very High Concern (SVHC) as listed on the candidate list published by ECHA..

Revision Date: 7/8/2014. Shelf life 1 year when stored at 70 °F maximum.

The information presented in this document is provided in good faith, but no warranty is given or is to be implied regarding its accuracy or relevance to any particular application. Users must satisfy themselves regarding the suitability and safety of their use of the information and products in the application concerned.

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