

Sumitomo Bakelite North America RX[®] 2-501N Mineral Filled Diallyl Phthalate

Category : Polymer , Thermoset , Diallyl Phthalate (DAP) , Diallyl Phthalate (DAP), Cast, Mineral Filler , Filled/Reinforced Thermoset

Material Notes:

Isophthalate DAP Resin Isomer. Used for critical, high-performance military and commercial electrical components where long-term reliability is demanded. Conforms with the requirements of ASTM D5948 Type MIG. Information provided by Sumitomo Bakelite North America, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Sumitomo-Bakelite-North-America-RX-2-501N-Mineral-Filled-Diallyl-Phthalate.php

Physical Properties	Metric	English	Comments
Density	1.80 g/cc	0.0650 lb/in ³	ASTM D792
Apparent Bulk Density	0.860 g/cc	0.0311 lb/in ³	
Water Absorption	0.25 %	0.25 %	48 hours, 50 [°] C. ASTM D570
Linear Mold Shrinkage	0.0030 - 0.0060 cm/cm	0.0030 - 0.0060 in/in	Compression Molding. ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	55.0 MPa	7980 psi	ASTM D638
Flexural Yield Strength	103 MPa	14900 psi	ASTM D790
Flexural Modulus	11.7 GPa	1700 ksi	ASTM D790
Compressive Yield Strength	145 MPa	21000 psi	ASTM D695
Izod Impact, Notched	0.240 J/cm	0.450 ft-lb/in	ASTM D256A

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 20.0 $\text{Å}^\circ\text{C}$	13.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 68.0 $\text{Å}^\circ\text{F}$	ASTM D696
Maximum Service Temperature, Air	130 $\text{Å}^\circ\text{C}$	266 $\text{Å}^\circ\text{F}$	UL temperature Index, UL 746B
Deflection Temperature at 1.8 MPa (264 psi)	274 $\text{Å}^\circ\text{C}$	525 $\text{Å}^\circ\text{F}$	ASTM D648A
UL RTI, Electrical	130 $\text{Å}^\circ\text{C}$	266 $\text{Å}^\circ\text{F}$	UL temperature Index, UL 746B
UL RTI, Mechanical with Impact	130 $\text{Å}^\circ\text{C}$	266 $\text{Å}^\circ\text{F}$	UL temperature Index, UL 746B
UL RTI, Mechanical without Impact	130 $\text{Å}^\circ\text{C}$	266 $\text{Å}^\circ\text{F}$	UL temperature Index, UL 746B

Thermal Properties	HB Metric	HB English	Comments
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	23 %	23 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.8	3.8	Wet
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	4.3	4.3	Wet
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	15.0 kV/mm	381 kV/in	Wet, step-by-step. ASTM D149
	16.0 kV/mm	406 kV/in	
Dissipation Factor	0.015	0.015	Wet; ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	0.019	0.019	Wet; ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Arc Resistance	150 sec	150 sec	ASTM D495
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL PLC 0 (120+ sec)
	@Thickness 3.05 mm	@Thickness 0.120 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL PLC 0 (120+ arcs)
	@Thickness 3.05 mm	@Thickness 0.120 in	
High Voltage Arc-Tracking Rate, HVTR	0.000 - 10.0 mm/min	0.000 - 0.394 in/min	UL PLC 0 (0-10 mm/min)
	@Thickness 3.05 mm	@Thickness 0.120 in	

Processing Properties	Metric	English	Comments
Processing Temperature	160 - 180 Â°C	320 - 356 Â°F	Mold temperature

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