

Sumitomo Bakelite North America RX[®] 3-1-525F-P Short-Glass Reinforced Diallyl Phthalate

Category : Polymer , Thermoset , Diallyl Phthalate (DAP) , Diallyl Phthalate (DAP) Molding Compound, Short Glass Fiber Filled , Filled/Reinforced Thermoset

Material Notes:

Ortho Resin Isomer (DAP). Used for critical, high-performance military and commercial electrical components where long-term reliability is demanded. Meets the requirements of ASTM D5948 Type SDG-F. 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-3-1-525F-P-Short-Glass-Reinforced-Diallyl-Phthalate.php

Physical Properties	Metric	English	Comments
Density	1.87 g/cc	0.0676 lb/in ³	ASTM D792
Apparent Bulk Density	0.810 g/cc	0.0293 lb/in ³	
Water Absorption	0.25 %	0.25 %	48 hours, 50 [°] C. ASTM D570
Linear Mold Shrinkage	0.0010 - 0.0030 cm/cm	0.0010 - 0.0030 in/in	Compression Molding. ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	83.0 MPa	12000 psi	ASTM D638
Flexural Yield Strength	131 MPa	19000 psi	ASTM D790
Flexural Modulus	12.4 GPa	1800 ksi	ASTM D790
Compressive Yield Strength	152 MPa	22000 psi	ASTM D695
Izod Impact, Notched	0.430 J/cm	0.806 ft-lb/in	ASTM D256A

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	19.0 μ m/m- [°] C @Temperature 20.0 [°] C	10.6 μ in/in- [°] F @Temperature 68.0 [°] F	ASTM D696
Thermal Conductivity	0.322 W/m-K	2.23 BTU-in/hr-ft ² - [°] F	ASTM F433
Maximum Service Temperature, Air	175 [°] C	347 [°] F	180/170 [°] C (360/340 [°] F), UL temperature Index, UL 746B
Deflection Temperature at 1.8 MPa (264 psi)	204 [°] C	399 [°] F	ASTM D648A
UL RTI, Electrical	170 [°] C	338 [°] F	UL temperature Index, UL 746B
UL RTI, Mechanical with Impact	170 [°] C	338 [°] F	UL temperature Index, UL 746B

Thermal Properties without Impact	Metric	English	Comments
Flammability, UL94	V-0	V-0	Flammability Index, UL 746B
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-0	V-0	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	39 %	39 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.5	3.5	Wet
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	4.2	4.2	Wet
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	Wet, step-by-step. ASTM D149
	18.0 kV/mm	457 kV/in	
Dissipation Factor	0.010	0.010	Wet; ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.016	0.016	Wet; ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Arc Resistance	130 sec	130 sec	ASTM D495
Comparative Tracking Index	>= 600 V	>= 600 V	UL 746A, ASTM D3638
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL PLC 0 (120+ sec)
	@Thickness 1.57 mm	@Thickness 0.0618 in	
High Amp Arc Ignition, HAI	15 - 29 arcs	15 - 29 arcs	UL PLC 3 (15-29 arcs)
	@Thickness 1.57 mm	@Thickness 0.0618 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 1.57 mm	@Thickness 0.0618 in	

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

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