Epiall® 1908-1

Epoxy; Epoxide

Sumitomo Bakelite North America, Inc.

Message:

Epiall 1908-1 is a short fiberglass reinforced epoxy molding compound, with excellent dimensional stability, good strength properties and good electrical insulation properties that meets the requirements of ASTM D5948 Type GEI-5.

General Information			
UL YellowCard	E123472-100085720		
Filler / Reinforcement	Glass Fiber		
Features	Electrically Insulating		
	Good Dimensional Stability		
	Good Strength		
Agency Ratings	ASTM D 5948, Type GEI-5		
Appearance	Black		
	Blue		
	Green		
	Grey		
Forms	Granules		
Processing Method	Compression Molding		
	Injection Molding		
	Resin Transfer Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.92	g/cm³	ASTM D792
Apparent Density	0.90	g/cm³	ASTM D1895
Molding Shrinkage - Flow (Compression			
Molded)	0.20 to 0.40	%	ASTM D955
Water Absorption - 48 hr (50°C)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break, Compression Molded)	80.0	MPa	ASTM D638
Flexural Modulus (Compression Molded)	15100	MPa	ASTM D790
Flexural Strength (Break)	130	MPa	ASTM D790
Compressive Strength	240	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Compression			
Molded)	37	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load (1.8 MPa, Annealed, Compression Molded)				
CLTE - Flow 3.7E-5 cm/cm/°C ASTM E831 Thermal Conductivity 0.73 W/m/K ASTM C177 RTI Elec 130 °C UL 746 RTI Imp 130 °C UL 746 RTI Str 130 °C UL 746 Electrical Nominal Value Unit Test Method Dielectric Strength ¹ ASTM D149 ASTM D149 ² 14 kV/mm ASTM D2520 Dissipation Factor ⁵ (1 MHz) 0.020 ASTM D150 Arc Resistance 180 sec ASTM D495 Flammability Nominal Value Unit Test Method Flame Rating (6.40 mm) V-0 UL 94 NOTE UL 94 1. Wet, 60 Hz Wet, 60 Hz 2. Method A (Short-Time) Method B (Step-by-Step) 4. Wet	Deflection Temperature Under Load (1.8			
Thermal Conductivity 0.73 W/m/K ASTM C177 RTI Elec 130 °C UL 746 RTI Imp 130 °C UL 746 RTI Str 130 °C UL 746 Electrical Nominal Value Unit Test Method Dielectric Strength ¹ ASTM D149 ASTM D149 ² 14 kV/mm ASTM D2520 Dissipation Factor ⁵ (1 MHz) 0.020 ASTM D2520 Dissipation Factor ⁵ (1 MHz) 0.020 ASTM D495 Flammability Nominal Value Unit Test Method Flame Rating (6.40 mm) V-0 UL 94 NOTE UL 94 1. Wet, 60 Hz Unit Test Method 2. Method A (Short-Time) Method B (Step-by-Step) US US	MPa, Annealed, Compression Molded)	> 282	°C	ASTM D648
RTI Elec 130 °C UL 746 RTI Imp 130 °C UL 746 RTI Str 130 °C UL 746 Electrical Nominal Value Unit Test Method Dielectric Strength ¹ 2 ASTM D149 3 13 kV/mm Dielectric Constant ⁴ (1 MHz) 4.10 ASTM D2520 Dissipation Factor ⁵ (1 MHz) 0.020 ASTM D150 Arc Resistance 180 sec ASTM D495 Flammability Nominal Value Unit Test Method NOTE 1. Wet, 60 Hz Unit Test Method 2. Method A (Short-Time) Method B (Step-by-Step) Unit Unit Unit	CLTE - Flow	3.7E-5	cm/cm/°C	ASTM E831
RTI Imp 130 °C UL 746 RTI Str 130 °C UL 746 Electrical Nominal Value Unit Test Method Dielectric Strength ¹ 4.10 kV/mm ASTM D149 ³ 13 kV/mm ASTM D2520 Dissipation Factor ⁵ (1 MHz) 0.020 ASTM D150 Arc Resistance 180 sec ASTM D495 Flame Rating (6.40 mm) V-0 Unit Test Method NOTE 1. Wet, 60 Hz UL 94 2. Method A (Short-Time) Method B (Step-by-Step) Unit Unit 3. Method B (Step-by-Step) Unit Unit Unit	Thermal Conductivity	0.73	W/m/K	ASTM C177
RTI Str 130 °C UL 746 Electrical Nominal Value Unit Test Method Dielectric Strength ¹ 2 ASTM D149 3 13 kV/mm Dielectric Constant ⁴ (1 MHz) 4.10 ASTM D2520 Dissipation Factor ⁵ (1 MHz) 0.020 ASTM D150 Arc Resistance 180 sec ASTM D495 Flammability Nominal Value Unit Test Method Flame Rating (6.40 mm) V-0 UL 94 NOTE 1. Wet, 60 Hz 2. Method A (Short-Time) 3. Method B (Step-by-Step) 4. Wet	RTI Elec	130	°C	UL 746
ElectricalNominal ValueUnitTest MethodDielectric Strength 1214kV/mm313kV/mmDielectric Constant 4 (1 MHz)4.10ASTM D2520Dissipation Factor 5 (1 MHz)0.020ASTM D150Arc Resistance180secASTM D495FlammabilityNominal ValueUnitTest MethodFlame Rating (6.40 mm)V-0Ut 94NOTENOTE2.Method A (Short-Time)3.Method B (Step-by-Step)4.Wet	RTI Imp	130	°C	UL 746
Dielectric Strength 1 2 14 kV/mm 3 13 kV/mm Dielectric Constant 4 (1 MHz) Dielectric Constant 4 (1 MHz) Dielectric Constant 5 (1 MHz) Dielectric Constant 5 (1 MHz) Dielectric Constant 6 (1 MHz) ASTM D2520 ASTM D2520 ASTM D150 ASTM D150 ASTM D495 ASTM D495 Plammability Nominal Value Unit Test Method NOTE 1. Wet, 60 Hz 2. Method A (Short-Time) 3. Method B (Step-by-Step) 4. Wet	RTI Str	130	°C	UL 746
14	Electrical	Nominal Value	Unit	Test Method
13 13 14 15 15 15 15 15 16 16 16	Dielectric Strength ¹			ASTM D149
Dielectric Constant ⁴ (1 MHz) 4.10 ASTM D2520 Dissipation Factor ⁵ (1 MHz) 0.020 Sec ASTM D495 Flammability Nominal Value Unit Test Method Flame Rating (6.40 mm) V-0 UL 94 NOTE 1. Wet, 60 Hz 2. Method A (Short-Time) 3. Method B (Step-by-Step) 4. Wet	2	14	kV/mm	
Dissipation Factor ⁵ (1 MHz) Arc Resistance 180 sec ASTM D495 Flammability Nominal Value Unit Test Method V-0 UL 94 NOTE 1. Wet, 60 Hz 2. Method A (Short-Time) 3. Method B (Step-by-Step) Wet	3	13	kV/mm	
Arc Resistance180secASTM D495FlammabilityNominal ValueUnitTest MethodFlame Rating (6.40 mm)V-0UL 94NOTE1.Wet, 60 Hz2.Method A (Short-Time)3.Method B (Step-by-Step)4.Wet	Dielectric Constant ⁴ (1 MHz)	4.10		ASTM D2520
Flammability Nominal Value Unit Test Method Flame Rating (6.40 mm) V-0 UL 94 NOTE 1. Wet, 60 Hz 2. Method A (Short-Time) 3. Method B (Step-by-Step) 4. Wet	Dissipation Factor ⁵ (1 MHz)	0.020		ASTM D150
Flame Rating (6.40 mm) V-0 UL 94 NOTE UL 94 1. Wet, 60 Hz 2. Method A (Short-Time) 3. Method B (Step-by-Step) 4. Wet	Arc Resistance	180	sec	ASTM D495
NOTE 1. Wet, 60 Hz 2. Method A (Short-Time) 3. Method B (Step-by-Step) 4. Wet	Flammability	Nominal Value	Unit	Test Method
1. Wet, 60 Hz 2. Method A (Short-Time) 3. Method B (Step-by-Step) 4. Wet	Flame Rating (6.40 mm)	V-0		UL 94
2.Method A (Short-Time)3.Method B (Step-by-Step)4.Wet	NOTE			
3. Method B (Step-by-Step) 4. Wet	1.	Wet, 60 Hz		
4. Wet	2.	Method A (Short-Time)		
	3.	Method B (Step-by-Step)		
5. Wet	4.	Wet		
	5.	Wet		

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