Epoxies, Ect. 50-3182 NC (Cat. 140)

Epoxy; Epoxide

Epoxies, Etc.

Message:

50-3182 NC is a highly filled epoxy system with excellent physical, electrical, and thermal properties. 50-3182 NC offers very high thermal conductivity, excellent electrical insulation, and low thermal expansion. This unique combination of properties makes this system ideal for applications where electrical insulation and mechanical protection must be maintained while transferring heat.

Applications:

50-3182 NC is ideal for high voltage applications such as power supplies, transformers, high voltage insulators, bushings, etc...

Good Adhesion Low Viscosity Thermally Conductive	General Information				
Low Viscosity Thermally Conductive	Features	Electrically Insulating			
Uses Bushings High Voltage Insulation Physical Nominal Value Unit Molding Shrinkage - Flow 0.10 % Mechanical Nominal Value Unit Plexural Strength 93.1 MPa Impact Nominal Value Unit Notched Izod Impact 19 //m Notched Izod Impact 19 //m Thermal Nominal Value Unit CLTE - Flow 3.0E-5 cm/cm/°C Thermal Conductivity 1.7 W/m/K Heat Distortion 175 °C Operating Temperature 5.50 to 205 °C Thermoset Mix Viscosity (25°C) 15000 cP Unicured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Part B 6.5 to 7.5 Density ¹ (25°C) 2.0 //m Cured Properties Nominal Value Unit Cured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Part B 6.5 to 7.5 Curing Time (66°C) 2.0 //cm Cured Properties Nominal Value Unit Water Absorption ² 0.11 0.00 //cm Cured Properties Nominal Value Unit		Good Adhesion			
Bushings High Voltage Insulation Physical Nominal Value Unit		Low Viscosity			
Physical Nominal Value Unit Molding Shrinkage - Flow 0.10 % Mechanical Nominal Value Unit Flexural Strength 93.1 MPa Impact Nominal Value Unit Notched Izod Impact 19 J/m Thermal Nominal Value Unit CLTE - Flow 3.0E-5 cm/cm/**C Thermal Conductivity 1.7 W/m/K Heat Distortion 175 *C Operating Temperature -55.0 to 205 *C Thermoset Nominal Value Unit Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) *C Part A 100 *C Part B 6.5 to 7.5 *G Density ¹ (25°C) 2.29 g/cm² Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption ² 0.11 %		Thermally Conductive			
Physical Nominal Value Unit Molding Shrinkage - Flow 0.10 % Mechanical Nominal Value Unit Flexural Strength 93.1 MPa Impact Nominal Value Unit Notched Izod Impact 19 J/m Thermal Nominal Value Unit CLTE - Flow 3.0E-5 cm/cm/**C Thermal Conductivity 1.7 W/m/K Heat Distortion 175 *C Operating Temperature -55.0 to 205 *C Thermoset Nominal Value Unit Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) *C Part A 100 *C Part B 6.5 to 7.5 *G Density ¹ (25°C) 2.29 g/cm² Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption ² 0.11 %					
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Molding Shrinkage - Flow 0.10 % Mechanical Nominal Value Unit Flexural Strength 93.1 MPa Impact Nominal Value Unit Notched Ized Impact 19 J/m Thermal Nominal Value Unit CLTE - Flow 3.0E-5 cm/cm/°C Thermal Conductivity 1.7 W/m/K Heat Distortion 175 °C Operating Temperature -55.0 to 205 °C Thermoset Nominal Value Unit Thermoset Mix Viscosity (25°C) 15000 cP Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Part A 100 Part B 6.5 to 7.5 Density ¹ (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption ² 0.11 %					
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Thermal Nominal Value Unit CLTE - Flow 3.0E - 5 cm/cm/°C Thermal Conductivity 1.7 W/m/K Heat Distortion 175 °C Operating Temperature -55.0 to 205 °C Thermoset Nominal Value Unit Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Unit Part A 100 Unit Part B 6.5 to 7.5 Density ¹ (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption ² 0.11 %	Impact	Nominal Value	Unit		
CLTE - Flow 3.0E-5 cm/cm/°C Thermal Conductivity 1.7 W/m/K Heat Distortion 175 °C Operating Temperature -55.0 to 205 °C Thermoset Nominal Value Unit Thermoset Mix Viscosity (25°C) 15000 cP Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Unit Part A 100 CP Part B 6.5 to 7.5 Density ¹ (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption ² 0.11 %	Notched Izod Impact	19	J/m		
Thermal Conductivity 1.7	Thermal	Nominal Value	Unit		
Heat Distortion 175 °C Operating Temperature -55.0 to 205 °C Thermoset Nominal Value Unit Thermoset Mix Viscosity (25°C) 15000 cP Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Part A 100 Part B 6.5 to 7.5 Density 1 (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption 2 0.11 %	CLTE - Flow	3.0E-5	cm/cm/°C		
Operating Temperature -55.0 to 205 °C Thermoset Nominal Value Unit Thermoset Mix Viscosity (25°C) 15000 cP Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Part A 100 Part B 6.5 to 7.5 Density 1 (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption 2 0.11 %	Thermal Conductivity	1.7	W/m/K		
Thermoset Mix Viscosity (25°C) 15000 cP Uncured Properties Nominal Value Unit Part A 100 Part B 6.5 to 7.5 Density 1 (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption 2 0.11 %	Heat Distortion	175	°C		
Thermoset Mix Viscosity (25°C) 15000 cP Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Part A 100 Part B 6.5 to 7.5 Density 1 (25°C) 2.29 g/cm³ Curing Time (66°C) 2.00 hr Cured Properties Nominal Value Unit Water Absorption 2 0.11 %	Operating Temperature	-55.0 to 205	°C		
Uncured Properties Nominal Value Unit Mix Ratio by Weight (PBW) Part A 100 Part B 6.5 to 7.5 Density 1 (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption 2 0.11 %	Thermoset	Nominal Value	Unit		
Mix Ratio by Weight (PBW) Part A 100 Part B 6.5 to 7.5 Density 1 (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption 2 0.11 %	Thermoset Mix Viscosity (25°C)	15000	сР		
Part A 100 Part B 6.5 to 7.5 Density ¹ (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption ² 0.11 %	Uncured Properties	Nominal Value	Unit		
Part B 6.5 to 7.5 Density 1 (25°C) 2.29 g/cm³ Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption 2 0.11 %	Mix Ratio by Weight (PBW)				
Density 1 (25°C)2.29g/cm³Curing Time (66°C)2.0hrCured PropertiesNominal ValueUnitWater Absorption 20.11%	Part A	100			
Curing Time (66°C) 2.0 hr Cured Properties Nominal Value Unit Water Absorption 2 0.11 %		6.5 to 7.5			
Cured Properties Nominal Value Unit Water Absorption 2 0.11 %	Density ¹ (25°C)	2.29	g/cm³		
Water Absorption ² 0.11 %	Curing Time (66°C)	2.0	hr		
	Cured Properties	Nominal Value	Unit		
Shore Hardness (Shore D) 95	Water Absorption ²	0.11	%		
	Shore Hardness (Shore D)	95			

Tensile Modulus	10300	MPa
Tensile Strength	58.6	MPa
Compression Strength	117	MPa
Electric Strength	22	kV/mm
Relative Permittivity (60 Hz)	6.40	
Volume Resistivity	4.9E+16	ohms·cm
Dissipation Factor (60 Hz)	0.018	
NOTE		
1.	Mixed	
2.	After 7 days	

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

