EPO-TEK® 730-110

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

A two component, room temperature-curing, thermally and electrically insulating epoxy. It can be used for adhesive, sealing, potting or encapsulation applications found in semiconductor, electronics, optical and medical devices.

General Information			
Features	Electrically Insulating		
	Thermally Insulating		
Uses	Adhesives		
	Electrical/Electronic Applications		
	Medical/Healthcare Applications		
	Optical Applications		
	Seals		
Agency Ratings	EC 1907/2006 (REACH)		
	EU 2003/11/EC		
	EU 2006/122/EC		
RoHS Compliance	RoHS Compliant		
Forms	Liquid		
Processing Method	Encapsulating		
	Potting		
Thermal	Nominal Value	Unit	
Glass Transition Temperature ¹	> 50.0	°C	
CLTE - Flow			
²	6.1E-5	cm/cm/°C	
3	1.9E-4	cm/cm/°C	
Optical	Nominal Value	Unit	
Refractive Index ⁴	1.528		
Transmittance (480 to 1640 nm)	> 95.0	%	
Thermoset	Nominal Value	Unit	
Thermoset Components			
Part A	Mix Ratio by Weight: 1.0		
Part B	Mix Ratio by Weight: 1.0		
Shelf Life (23°C)	52	wk	
Additional Information	Nominal Value	Unit	

Degradation Temperature 343 *C Die Shear Strength → 10 kg (23*C) 23.4 MPa Operating Temperature -55 to 150 *C Lotrinuous -55 to 150 *C Intermittent -55 to 250 *C Storage Modulus 896 MPa Weight Loss on Heating (200*C) 1.0 % Uncured Properties Nominal Value Unit Color *** *** *** *** ** ** *** *** *** *** *** ***				
Operating Temperature Continuous -55 to 150 °C Intermittent -55 to 250 °C Storage Modulus 896 MPa Weight Loss on Heating (200°C) 1.0 % Uncured Properties Nominal Value Unit Color 5 Clear/Transparent 6 Yellow Part B 0.968 g/cm³ Part A 1.17 g/cm³ Viscosity 7 (23°C) 8.0 to 12 Pa · s Curing Time (80°C) 2.0 hr Pot Life 60 min Cured Properties Nominal Value Unit Shore Hardness (Shore D) 76 Lap Shear Strength (23°C) > 13.8 MPa Relative Permittivity (1 kHz) 3.10 Volume Resistivity (23°C) > 4.0E+12 ohms·cm Dissipation Factor (1 kHz) 8.0E-3 ohms·cm NOTE Min Ramp -10-200°C @ 20°C/Min Smin Ramp -10-200°C @ 20°C/Min 2. Below Tg Smin	Degradation Temperature	343	°C	
Continuous -55 to 150 °C Intermittent -55 to 250 °C Storage Modulus 896 MPa Weight Loss on Heating (200°C) 1.0 % Uncured Properties Nominal Value Unit Color Unit Color 5 Clear/Transparent	Die Shear Strength - >10 kg (23°C)	23.4	MPa	
Intermittent -55 to 250 *C Storage Modulus 896 MPa Weight Loss on Heating (200°C) 1.0 % Uncured Properties Nominal Value Unit Color 5 Clear/Transparent 6 Yellow Part A Part B 0.968 9/cm³ Part A 1.17 9/cm³ Viscosity 7 (23°C) 8.0 to 12 Pa ·s Curing Time (80°C) 2.0 hr Pot Life 60 min Cured Properties Nominal Value Unit Shore Hardness (Shore D) 76 Heart Strength (23°C) > 13.8 MPa Relative Permittivity (1 kHz) 3.10 Heart Strength (23°C) > 4.0E+12 ohms·cm Dissipation Factor (1 kHz) 8.0E-3 Heart Strength (23°C) Nominal Value ohms·cm 1. Dynamic Cure 20-200°C/ISO 25 Min, Ramp -10-200°C @ 20°C/Min Heart Strength (23°C) Nominal Value Heart Strength (23°C) Nominal Value Heart Strength (23°C) Nominal Value Heart Strength (23°C)	Operating Temperature			
Storage Modulus 896 MPa Weight Loss on Heating (200°C) 1.0 % Uncured Properties Nominal Value Unit Color ** Clear/Transparent ** ** Yellow ** Density ** yellow ** Part B 0.968 g/cm³ ** Part A 1.17 g/cm³ ** Viscosity ⁷ (23°C) 8.0 to 12 Pa·s ** Curing Time (80°C) 2.0 hr ** Pot Life 60 min ** Cured Properties Nominal Value Unit ** Shore Hardness (Shore D) 76 ** ** Lap Shear Strength (23°C) > 13.8 MPa ** Relative Permittivity (1 kHz) 3.10 ** ** Volume Resistivity (23°C) > 4.0E+12 ohms··cm ** NOTE ** ** ** **	Continuous	-55 to 150	°C	
Weight Loss on Heating (200°C) 1.0 % Uncured Properties Nominal Value Unit Color 6 Yellow 6 Yellow 6 Density 6 ye/m³ Part B 0.968 g/cm³ Part A 1.17 g/cm³ Viscosity 7 (23°C) 8.0 to 12 Par s Curing Time (80°C) 2.0 hr Pot Life 60 min Cured Properties Nominal Value Unit Shore Hardness (Shore D) 76 Lap Shear Strength (23°C) > 13.8 MPa Relative Permittivity (1 kHz) 3.10 Volume Resistivity (23°C) > 4.0E+12 ohms·cm Dissipation Factor (1 kHz) 8.0E-3 The control of the contr	Intermittent	-55 to 250	°C	
Uncured Properties Nominal Value Unit Color 5 Clear/Transparent 6 Yellow Density	Storage Modulus	896	MPa	
Clear/Transparent 6 Yellow Density Part B 0.968 g/cm³ Part A 1.17 g/cm³ Viscosity ⁷ (23°C) 8.0 to 12 Pa · s Curing Time (80°C) 2.0 hr Pot Life 60 min Cured Properties Nominal Value Unit Shore Hardness (Shore D) 76 Hardness (Shore D) MPa Relative Permittivity (1 kHz) 3.10 MPa Volume Resistivity (23°C) > 4.0€+12 ohms·cm Dissipation Factor (1 kHz) 8.0E-3 The colspan="2">NOTE NoTE Min; Ramp -10-200°C (9 20°C/Min Lap Shear Street (1 kHz) Above Tg 1. Above Tg 4. S99 nm 5. Part A A 6. Part A 6. Part B	Weight Loss on Heating (200°C)	1.0	%	
Clear/Transparent yellow Density Part B 0.968 g/cm³ Part A 1.17 g/cm³ Viscosity ⁷ (23°C) 8.0 to 12 Pa · S Curing Time (80°C) 2.0 hr Pot Life 60 min Cured Properties Nominal Value Unit Shore Hardness (Shore D) 76 Hardness (Shore D) 76 Lap Shear Strength (23°C) > 13.8 MPa Relative Permittivity (1 kHz) 3.10 Polymer Resistivity (23°C) > 4.0E+12 ohms·cm Dissipation Factor (1 kHz) 8.0E-3 Polymer Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min Polymer Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min Polymer Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min Polymer Cure 20-200°C/ISO 25 Polymer Cure 20-200°C/ISO 25 <td>Uncured Properties</td> <td>Nominal Value</td> <td>Unit</td>	Uncured Properties	Nominal Value	Unit	
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Curing Time (80°C) 2.0 hr Pot Life 60 min Cured Properties Nominal Value Unit Shore Hardness (Shore D) 76 Lap Shear Strength (23°C) > 13.8 MPa Relative Permittivity (1 kHz) 3.10 Ohms·cm Volume Resistivity (23°C) > 4.0E+12 ohms·cm Dissipation Factor (1 kHz) 8.0E-3 NOTE 1. Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min 2. Below Tg 3. Above Tg 4. 589 nm 5. Part A Part A 6. Part B Part B	Part A	1.17	g/cm³	
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Cured PropertiesNominal ValueUnitShore Hardness (Shore D)76Lap Shear Strength (23°C)> 13.8MPaRelative Permittivity (1 kHz)3.10Volume Resistivity (23°C)> 4.0E+12ohms·cmDissipation Factor (1 kHz)8.0E-3NOTE1.Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min2.Below Tg3.Above Tg4.589 nm5.Part A6.Part B	Curing Time (80°C)	2.0	hr	
Shore Hardness (Shore D) 76 Lap Shear Strength (23°C) > 13.8 MPa Relative Permittivity (1 kHz) 3.10 Volume Resistivity (23°C) > 4.0E+12 ohms·cm Dissipation Factor (1 kHz) 8.0E-3 NOTE 1. Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min 2. Below Tg 3. Above Tg 4. 589 nm 5. Part A 6. Part B	Pot Life	60	min	
Lap Shear Strength (23°C) > 13.8 MPa Relative Permittivity (1 kHz) 3.10 Ohms·cm Volume Resistivity (23°C) > 4.0E+12 ohms·cm Dissipation Factor (1 kHz) 8.0E-3 NOTE 1. Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min 2. Below Tg 3. Above Tg 4. 589 nm 5. Part A 6. Part B	Cured Properties	Nominal Value	Unit	
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Volume Resistivity (23°C)> 4.0E+12ohms · cmDissipation Factor (1 kHz)8.0E-3NOTE1.Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min2.Below Tg3.Above Tg4.589 nm5.Part A6.Part B	Lap Shear Strength (23°C)	> 13.8	MPa	
Dissipation Factor (1 kHz) 8.0E-3 NOTE 1. Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min 2. Below Tg 3. Above Tg 4. 589 nm 5. Part A 6. Part B	Relative Permittivity (1 kHz)	3.10		
NOTE Dynamic Cure 20-200°C/ISO 25 1. Min; Ramp -10-200°C @ 20°C/Min 2. Below Tg 3. Above Tg 4. 589 nm 5. Part A 6. Part B	Volume Resistivity (23°C)	> 4.0E+12	ohms·cm	
Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min 2. Below Tg 3. Above Tg 4. 589 nm 5. Part A 6. Part B	Dissipation Factor (1 kHz)	8.0E-3		
1. Min; Ramp -10-200°C @ 20°C/Min 2. Below Tg 3. Above Tg 4. 589 nm 5. Part A 6. Part B	NOTE			
3. Above Tg 4. 589 nm 5. Part A 6. Part B	1.			
4. 589 nm 5. Part A 6. Part B	2.	Below Tg		
5. Part A 6. Part B	3.	Above Tg		
6. Part B	4.	589 nm		
	5.	Part A		
7. 20 rpm	6.	Part B		
	7.	20 rpm		

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