

EPO-TEK® N20E

Epoxy; Epoxide
Epoxy Technology Inc.

Message:

EPO-TEK® N20E is a two component, electrically and thermally conductive, epoxy adhesive designed for semiconductor and electronics assembly. Its applications and field conditions include the optical, sensor, consumer, and industrial industries.

General Information			
Features	Electrically Conductive		
	Electromagnetic Shielding (EMI)		
	Radio Frequency Shielding (RFI)		
	Thermally Conductive		
	Thixotropic		
Uses	Adhesives		
	Consumer Applications		
	Electrical/Electronic Applications		
	Industrial Applications		
	Optical Applications		
	Printed Circuit Boards		
Agency Ratings	EC 1907/2006 (REACH)		
	EU 2003/11/EC		
	EU 2006/122/EC		
RoHS Compliance	RoHS Compliant		
Forms	Paste		
Physical	Nominal Value	Unit	
Ion Type			
Cl-	34	ppm	
K+	10	ppm	
Na+	265	ppm	
NH4+	16	ppm	
Degradation Temperature	478	°C	TGA
Die Shear Strength - > 10 kg (23°C)	23.4	MPa	
Operating Temperature			
Continuous	-55 to 200	°C	
Intermittent	-55 to 300	°C	
Storage Modulus (23°C)	7.87	GPa	
Thixotropic Index	1.90		

Weight Loss on Heating			
200°C	0.070	%	
250°C	0.22	%	
300°C	0.81	%	
Thermal	Nominal Value	Unit	
Glass Transition Temperature ¹	> 70.0	°C	
CLTE - Flow			
-- ²	2.7E-5	cm/cm/°C	
-- ³	8.9E-5	cm/cm/°C	
Thermal Conductivity	1.2	W/m/K	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Part A	Mix Ratio by Weight: 1.0		
Part B	Mix Ratio by Weight: 1.0		
Shelf Life (23°C)	52	wk	
Uncured Properties	Nominal Value	Unit	Test Method
Color			
-- ⁴	Grey		
-- ⁵	Grey		
Density			
Part B	2.85	g/cm ³	
Part A	2.92	g/cm ³	
Viscosity ⁶ (23°C)	5.0 to 10	Pa · s	
Curing Time (150°C)	1.0	hr	
Pot Life	2200	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	50		
Volume Resistivity (23°C)	< 0.070	ohms · cm	
NOTE			
1.	Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min		
2.	Below Tg		
3.	Above Tg		
4.	Part B		
5.	Part A		
6.	20 rpm		

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Recommended distributors for this material

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

