

EPO-TEK® H20E-LC

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

EPO-TEK® H20E-LC is a two component, silver-filled epoxy system designed specifically for chip bonding in microelectronic and optoelectronic applications. It is also used extensively for thermal management applications due to its high thermal conductivity. It has proven itself to be extremely reliable over many years of service and is the conductive adhesive of choice for low chloride applications.

General Information		
Filler / Reinforcement	Silver	
Features	Electrically Conductive	
	Fast Cure	
	Thermally Conductive	
Uses	Adhesives	
	Bonding	
	Electrical/Electronic Applications	
	LCD Applications	
	LEDs	
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-	11	ppm
K+	2	ppm
Na+	6	ppm
NH4+	259	ppm
Particle Size	< 45.0	µm
Degradation Temperature	451	°C
Die Shear Strength - >5 kg (23°C)	11.7	MPa
Operating Temperature		
Continuous	-55 to 200	°C
Intermittent	-55 to 300	°C
Storage Modulus	6.48	GPa
Thixotropic Index	4.60	
Weight Loss on Heating		

200°C	0.42	%
250°C	1.0	%
300°C	2.0	%
Thermal	Nominal Value	Unit
Glass Transition Temperature ¹	> 80.0	°C
CLTE - Flow		
-- ²	4.4E-5	cm/cm/°C
-- ³	1.7E-4	cm/cm/°C
Thermal Conductivity	2.0	W/m/K
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
Uncured Properties	Nominal Value	Unit
Color		
-- ⁴	Silver	
-- ⁵	Silver	
Density		
Part A	2.41	g/cm ³
Part B	3.06	g/cm ³
Viscosity ⁶ (23°C)	2.2 to 3.2	Pa·s
Curing Time (150°C)	1.0	hr
Pot Life	5800	min
Cured Properties	Nominal Value	Unit
Shore Hardness (Shore D)	60	
Lap Shear Strength (23°C)	11.5	MPa
Volume Resistivity (23°C)	< 4.0E-4	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.	100 rpm	

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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

