

EPO-TEK® H20E-LV

Epoxy; Epoxide
Epoxy Technology Inc.

Message:
EPO-TEK® H20E-LV is a two component, 100% solids silver-filled epoxy system designed specifically for chip bonding in microelectronic and optoelectronic applications. It is a low viscosity version of EPO-TEK® H20E, semiconductor die-attach epoxy.

General Information		
Filler / Reinforcement	Silver	
Features	Electrically Conductive	
	Fast Cure	
	Low Viscosity	
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-	102	ppm
K+	25	ppm
Na+	98	ppm
NH4+	320	ppm
Particle Size	< 45.0	µm
Degradation Temperature	400	°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 (23°C)	4.42	GPa
Thixotropic Index	3.43	
Weight Loss on Heating (300°C)	2.3	%

Thermal	Nominal Value	Unit	
Glass Transition Temperature ¹	> 80.0	°C	
CLTE - Flow			
-- ²	2.6E-5	cm/cm/°C	
-- ³	9.3E-5	cm/cm/°C	
Thermal Conductivity	2.5	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	Silver		
-- ⁵	Silver		
Density			
Part A	1.93	g/cm ³	
Part B	3.06	g/cm ³	
Viscosity ⁶ (23°C)	1.8 to 2.8	Pa·s	
Curing Time (150°C)	1.0	hr	
Pot Life	4300	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	86		
Lap Shear Strength (23°C)	10.3	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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