

EPO-TEK® H20E-HC

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

EPO-TEK® H20E-HC is a two component, 100% solids 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. Also available in a single component frozen syringe. This is an increased thermal conductivity version of EPO-TEK H20E.

General Information		
Filler / Reinforcement	Silver	
Features	Electrically Conductive	
	Thermally Conductive	
	Thixotropic	
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-	34	ppm
K+	17	ppm
Na+	24	ppm
NH4+	45	ppm
Particle Size	< 45.0	µm
Degradation Temperature	372	°C
Die Shear Strength - >5 kg (23°C)	11.7	MPa
Operating Temperature		
Continuous	-55 to 175	°C
Intermittent	-55 to 275	°C
Storage Modulus	3.95	GPa
Thixotropic Index	3.48	
Weight Loss on Heating		

200°C	0.14	%
250°C	0.42	%
300°C	1.1	%
Thermal	Nominal Value	Unit
CLTE - Flow		
-- 1	5.3E-5	cm/cm/°C
-- 2	8.0E-5	cm/cm/°C
Thermal Conductivity		
-- 3	11	W/m/K
-- 4	23	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		
-- 5	Silver	
-- 6	Silver	
Density		
Part A	3.43	g/cm³
Part B	4.38	g/cm³
Viscosity ⁷ (23°C)	3.5 to 6.0	Pa · s
Curing Time (150°C)	1.0	hr
Pot Life	3600	min
Cured Properties	Nominal Value	Unit
Shore Hardness (Shore D)	93	
Volume Resistivity (23°C)	< 8.0E-5	ohms · cm
NOTE		
1.	Below Tg	
2.	Above Tg	
3.	150°C/1 Hour Cure	
4.	150°C/1 Hour+200°C/1 Hour Cure	
5.	Part B	
6.	Part A	
7.	50 rpm	

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