

EPO-TEK® H27D

Epoxy; Epoxide
Epoxy Technology Inc.

Message:
EPO-TEK® H27D is a two component, silver-filled epoxy adhesive designed for semiconductor and hybrid-microelectronic packaging applications.

General Information		
Filler / Reinforcement	Silver	
Features	Electrically Conductive	
	Electromagnetic Shielding (EMI)	
	Low to No Outgassing	
	Radio Frequency Shielding (RFI)	
Uses	Adhesives	
	Electrical/Electronic Applications	
	Printed Circuit Boards	
Agency Ratings	ASTM E 595	
	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-	8	ppm
K+	10	ppm
Na+	25	ppm
NH4+	7	ppm
Particle Size	< 45.0	µm
Degradation Temperature	413	°C
Die Shear Strength - > 15 kg (23°C)	35.2	MPa
Operating Temperature		
Continuous	-55 to 225	°C
Intermittent	-55 to 325	°C
Storage Modulus (23°C)	3.72	GPa
Thixotropic Index	1.30	
Weight Loss on Heating		
200°C	0.49	%

250°C	0.50	%	
300°C	0.63	%	
Thermal	Nominal Value	Unit	
Glass Transition Temperature ¹	> 80.0	°C	
CLTE - Flow			
-- ²	2.9E-5	cm/cm/°C	
-- ³	1.2E-4	cm/cm/°C	
Thermal Conductivity	1.2	W/m/K	
Thermoset	Nominal Value	Unit	Test Method
Thermoset Components			
Part A	Mix Ratio by Weight: 10		
Part B	Mix Ratio by Weight: 1.0		
Shelf Life (23°C)	52	wk	
Uncured Properties	Nominal Value	Unit	Test Method
Color			
-- ⁴	Amber		
-- ⁵	Silver		
Density			
Part B	1.22	g/cm ³	
Part A	3.78	g/cm ³	
Viscosity ⁶ (23°C)	2.5 to 4.0	Pa·s	
Curing Time (150°C)	1.0	hr	
Pot Life	480	min	
Cured Properties	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	55		
Lap Shear Strength (23°C)	8.88	MPa	
Volume Resistivity (23°C)	< 5.0E-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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