

EPO-TEK® H77S

Epoxy; Epoxide

Epoxy Technology Inc.

Message:

A two component, thermally conductive, electrically insulating high-temperature epoxy adhesive. It can be used for high temperature applications within semiconductor packaging including glob top and underfill, hybrid microelectronics, optical, and medical. It is a smaller particle size version of EPO-TEK® H77.

General Information		
Features	Electrically Insulating	
	High Heat Resistance	
	Thermally Conductive	
Uses	Adhesives	
	Electrical/Electronic Applications	
	Medical/Healthcare Applications	
	Optical Applications	
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-	78	ppm
K+	7	ppm
Na+	12	ppm
NH4+	1	ppm
Particle Size	< 20.0	µm
Degradation Temperature	432	°C
Die Shear Strength - > 15 kg (23°C)	35.2	MPa
Operating Temperature		
Continuous	-55 to 250	°C
Intermittent	-55 to 350	°C
Storage Modulus (23°C)	3.91	GPa
Thixotropic Index	1.20	
Weight Loss on Heating		
250°C	0.060	%
300°C	0.26	%

Thermal	Nominal Value	Unit
Glass Transition Temperature ¹	> 80.0	°C
CLTE - Flow		
-- ²	3.9E-5	cm/cm/°C
-- ³	9.8E-5	cm/cm/°C
Thermal Conductivity	0.67	W/m/K
Thermoset	Nominal Value	Unit
Thermoset Components		
Part A	Mix Ratio by Weight: 100	
Part B	Mix Ratio by Weight: 35	
Shelf Life (23°C)	52	wk
Uncured Properties	Nominal Value	Unit
Color		
-- ⁴	Amber	
-- ⁵	Grey	
Density		
Part B	1.22	g/cm ³
Part A	2.05	g/cm ³
Viscosity ⁶ (23°C)	0.95 to 1.5	Pa·s
Curing Time (150°C)	1.0	hr
Pot Life	480	min
Cured Properties	Nominal Value	Unit
Shore Hardness (Shore D)	85	
Lap Shear Strength (23°C)	11.3	MPa
Relative Permittivity (1 kHz)	4.82	
Volume Resistivity (23°C)	> 4.0E+11	ohms·cm
Dissipation Factor (1 kHz)	0.015	
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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