



THERMALLY CONDUCTIVE ADHESIVES

EPOXIBOND Thermally Conductive Adhesives are designed for demanding needs for die-attach; heat sink bonding and surface mount applications. They rapidly transfer heat, eliminate hot spot, and increase the operating efficiency of most devices. Its low shrinkage minimizes risk of damage to fragile components. Typical applications include fabricating heat sinks, bonding semiconductors, transistors to heat sinks for wireless communications, satellite transmission and circuit board manufacturing.

EPOXIBOND		EB-401-1	EB-402-1	EB-403-1	EB-404-1	EB-407	EB-425	EB-485	EB-486
Hardener		NA	NA	NA	NA	EH-9	EH-6	EH-9	PART-B
Mix ratio by weight (Epoxybond/Hardener)		ONE PART	ONE PART	ONE PART	ONE PART	100/4	100/5	100/3.5	100/100
Viscosity @ 25°C	cps	Paste	Paste	Paste	35,000	Paste	Paste	Paste	Paste
Storage Temperature		25°C or below	-40°C or below	25°C or below	25°C or below	25°C	25°C	25°C	25°C
Pot life (100 grams)		½ hr @ 80°C	3 days @ 25°C	½ hr @ 80°C	<10 minutes @ 80°C	2 hr @ 25°C	>4 hr @ 25°C	½ hr @ 25°C	2 hr @ 25°C
Shelf Life		4 months @ 25°C	12 months @ -40°C	4 months @ 25°C	4 months @ 25°C	2 years @ 25°C	2 years @ 25°C	2 years @ 25°C	2 years @ 25°C
Recommended Cure		1 hr @ 100°C+ 1 hr @ 150°C	2 hr @ 125°C	1 hr @ 100°C + 1 hr @ 150°C	1 hr @ 125°C	½ hr @ 100°C	2 hr @ 100°C+ 2 hr @ 150°C	2 hrs @ 70°C	24-48 hrs @ 25°C
Alternate Cure		30 minutes @ 150°C	15 minutes @ 150°C	30 minutes @ 150°C	30 minutes @ 150°C	24-48 hrs @ 25°C	4 hrs @ 125°C	24 hrs @ 25°C	1 hr @ 100°C
TYPICAL CURED PROPERTIES									
Color		Black	Black	Black	Red	Black	Black	Black	Black
Specific Gravity		1.66	2.14	2.1	1.6	2.3	2.3	2.3	1.7
Hardness	Shore D	90	91	90	90	94	94	90	86
Thermal Conductivity	W/m°K	1.1	1.6	1.8	1.1	1.53	1.53	1.53	1.0
Lap shear strength	psi	2620	2200	2620	3400	2400	2400	2400	2800
Water Absorption (24 hours @ 25°C)	%	0.1	0.12	0.1	0.09	0.14	0.007	0.01	0.12
Glass Transition Temperature	°C	140	145	132	130	77	165	120	80
Coefficient of Thermal Expansion	10 ⁻⁶ /°C	31.5	24.5	27.5	39	27	29	26	60
Service Temperature Range	°C	-55°C to 180°C	-55°C to 180°C	-55°C to 180°C	-55°C to 165°C	-55°C to 120°C	-55°C to 180°C	-55°C to 150°C	-55°C to 120°C
Dielectric Strength (3mm thickness)	Volts/mil	450	460	460	400	460	460	430	420
Dielectric Constant	@ 1 kHz	5.2	6.1	5.3	4.73	5.9	6.19	5.8	5.3
Dissipation Factor	@ 1 kHz	0.01	0.02	0.04	0.01	0.008	0.015	0.01	0.08
Volume Resistivity	Ohm-cm	1x10 ¹⁵	2x10 ¹⁵	6x10 ¹⁵	3x10 ¹⁵	7x10 ¹³	1x10 ¹⁶	2x10 ¹⁵	1x10 ¹⁵

DISCLAIMER: All data given here is offered as a guide to the use of these materials and not as a guarantee of their performance. The user should evaluate their suitability for own purposes. Properties are typical and should not be used in preparing specifications. Statements are not to be construed as recommendations to infringe any patent.