

Two-part Thermally Conductive Adhesive XK-D10

Introduction

XK-D10 is a two-part, epoxy based, liquid dispensable, thermally conductive adhesive with a thermal conductivity of 1.0W/mK. This material features high performance, electrical insulation, structural bonding and seal. XK-D10 provides strong bonding with room temperature cure and can be accelerated with elevated temperature. The high bonding strength eliminates the need of fasteners and maintains structural bond in severe environments. It will flow or fill gaps under low pressure resulting in low stress on component.

Features

Filling gaps between heat source and heat sink 适于散热器与热源之间的导热与填充 ;

Excellent electrical insulation, bond strength \geq 8 Mpa 超高电气绝缘, 粘结强度 \geq 8 Mpa

Application temperature: -45~175°C, Short term: 250°C 应用温度-45~123°C, 短期 225°C

Applications

Aerospace equipments

Semiconductor

Telecommunication

Rail transit

Battery pack

between water cooling plate and heat source



	Unit	XK-D10	METHOD
Before Mix			
Color / Part A		Red	Visual
Color / Part B		White	Visual
Viscosity (Low shear)	Pa.s	75±35	ASTM D2196
Shelf Life @ 25°C	Months	≥6	UL 746B
After Mixed			
Presentation		Thixotropic	Visual
Mixt Ratio (A : B) by Volume		1:1	
Working time	H	≥3	ASTM D2377
Cure Schedule 1 @25°C	H	24±8	ASTM D4473
Cure Schedule 2 @125°C	Min	10±3	ASTM D4473
After Cured			
Color		Red	Visual/PATONE
Specific gravity	g/cm ³	1.65±0.1	ASTM D792
Thermal Conductivity	W/m·K	1.0	ASTM D5470
Thermal Capacity	J/(g.k)	1	ASTM D1269
Hardness	ShoreD	75	ASTM D2240
Tensile strength (Before aging)	mpa	≥13	ASTM D412
Tensile strength (After aging)	mpa	≥8	ASTM D412
Elongation (Before aging)	%	≥13	ASTM D412
Elongation (After aging)	%	≥8	ASTM D412
Bonding strength (Before aging)	MPa	≥8	GJB 94
Bonding strength (After aging)	MPa	≥8	GJB 94
Coefficient of linear expansion	ppm/k	110±35	GJB 332A/ASTM E831
Dielectric strength (Before aging)	kV/mm	≥10	ASTM D412
Dielectric strength (After aging)	kV/mm	≥10	ASTM D412
Volume resistivity	Ω.cm	≥10 ¹³	ASTM D257
Operating thickness	mm	≥0.09	ISO 2360
Application temperature	°C	-45~175	ASTM G166
Flammability		V-0	UL94
RoHs/SS00259 compliant		YES	