

TH 732-1

Thermal Conductive Epoxy

Description

TH 732-1 is a one-part high performance thermal conductive adhesive based on epoxy resins. It cures fast at elevated temperatures and has excellent adhesion to most pc boards and electronic components. It may be cured at 100°C or faster at 150°C. It has no sagging. It has a stable pot life and long shelf life even at room temperature of 25°C. It has relatively low viscosity for faster dispense from syringes.

Applications

Heat dissipation from electronic components.

Guidelines for Use

1. Thaw the epoxy to room temperature (25°C) before use.
2. Dispense the epoxy by using a syringe.
3. Wipe off any excess uncured adhesive with a piece of dry cloth or tissue. Further cleaning may be achieved with tissue dabbed with isopropanol.
4. Cure the epoxy by heating in a convection oven at 120°C for 1 hour. Curing at lower temperature will require a longer time.

Recommended Cure

Alternative cures	Temp., C	Time, min.
A	120	60
B	150	30

Properties

Property	Test Method	Unit	Typical Value
Chemical type	-	-	Epoxy
Appearance	Pen 10	-	White paste
Mix ratio, w/w			One component
Shelf life, -20°C	Pen 26	Month	6
Pot life, 25°C	Pen 26	Week	1
Viscosity, Brookfield RVT, 25°C	Pen 11	cP	110,000
Thixotropic index	Pen 37		1.8 – 2.8
Specific gravity, 25°C	Pen 14		1.98
Hardness, cured 120°C/1hr	Pen 29	Shore D	86 - 96
Shear strength, cured 120°C/1hr	Pen 36	Kg/cm	182
Tensile strength	-	psi	9,000 – 12,500
Elongation at break	-	%	0.5 – 3.0
Tg, DSC, cured 120°C/1hr	Pen 19	°C	120 - 135
CTE, CTE-1	-	m/m/°C	4.0-8.0 x 10 ⁻⁶
CTE-2	-	m/m/°C	1.4-2.5 x 10 ⁻⁵
Boiling water wt gain, cured 120°C/1hr	Pen 21	%	< 1.0
Ionic content, Cl	-	ppm	< 50
K	-	ppm	< 50
Na	-	ppm	< 180
Thermal conductivity	ISO/DIS22007	W/mK	> 1.1
Electrical resistivity	-	Ωcm	> 1.1
Filler type	-	-	Metal oxide

Storage

Tightly close original container of unused product. Store below -20°C. Storing at lower temperatures down to -40°C may prolong shelf life beyond 6 months. However it may take longer time to thaw the product.

Packaging & Dimension

- 30 ml EFD syringe
- 300 ml plastic jar
- 1 kg plastic pail

Environment, Health & Safety

This product is RoHS compliant. It does not contain any known carcinogenic, mutagenic or teratogenic components.

Contact Information

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Revision 3: 30-May-16.NN