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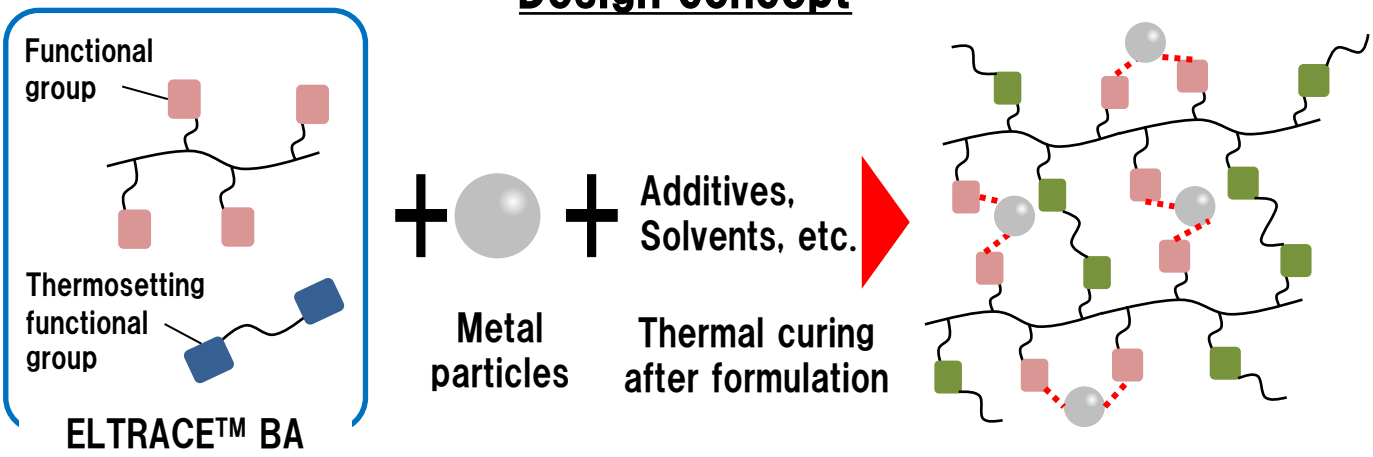
Thermal curing acrylic binder for conductive paste ELTRACE™ BA

Characteristics

- Single liquid form, thermal curing type acrylic binder
- Has good handling properties with little odor, low viscosity and low stringiness
- Can be used for a wide range of substrates since it demonstrates excellent conductivity at low temperature curing
- Is particularly suitable for wiring on flexible substrates as its cured film has good flexibility

Design concept



The functional group of ELTRACE™ BA contributes to improving dispersion of metal particles.
The paste with ELTRACE™ BA shows excellent viscous stability and low volume resistivity.

General properties

Item	Properties	Remarks
Appearance	Yellowish, transparent liquid	–
Solid content (%)	Approximately 50	–
Molecular weight (Mw)	Approximately 10,000	–
Viscosity (Pa・s)	Approximately 5	E type viscosity gauge, 25℃
Tg (℃)	50	TMA method
CTE (ppm/℃)	180/1,100	TMA method、α1/α2
Storage modulus (MPa)	330	DMA method、25℃
Solvent	Terpineol-based, glycol-based, etc.	–

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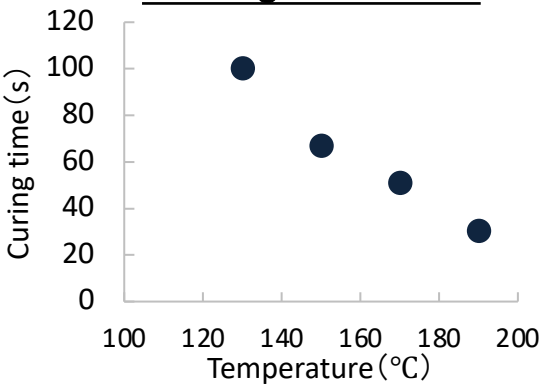
Stringiness

ELTRACE™ BA

Bis-A type epoxy resin

Demonstrates little stringiness and good printability

Curing behavior



Film properties (binder resin)

		Solvent resistance	Adhesiveness	Bendability
		Acetone rubbing test	Cross-cut test	Seam folding test
Heating conditions	100℃×30 min.	Scratches	Peeling	Cracks
	130℃×30 min.	No scratches	No peeling	No cracks
	150℃×30 min.	No scratches	No peeling	No cracks

It is possible to obtain cured film by heating at 130℃ and higher.

Conductive paste formulation example

Name			Formulation content	
			Silver paste	Copper paste
Paste composition	Silver particles (average particle diameter: 5μm)		85%	—
	Copper particles (average particle diameter: 5μm)		—	85%
	ELTRACE™ BA-PH7030		8%	8%
	Dispersant (ESLEAM™ 221P)		0.5%	0.5%
	Antioxidant (phenol-based)		—	0.5%
	Solvent (terpineol)		Balance	Balance
Evaluation results	Volume resistivity (μΩ・cm)	Heating conditions: atmosphere130℃ x 30 min.	28	25

Chemical inventory status

Japan(ENCS)	China(IECSC)	Taiwan(TCSI)	Korea(AREC)	US(TSCA)
※1	Not listed	Not listed	Not listed	Not listed

※1 Low volume new chemical substances

If you have any unclear points, please contact one of our sales representatives.

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Ver.2.0 (2025.9)