ASAHI CHEMICAL MATERIAL FOR PCB ASSEMBLY

DATA No.910424

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ADHESIVE FOR CHIP COMPONENT

SA-35

TECHNICAL DATA SHEET

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This adhesive is a single component, thermosetting type for semi-conductor chips and resistor chip bonding. Excellent adhesive strength, electric insulation and heat resistance are all achieved by the use of epoxy resin material used as its main component.

This product is thermal-cured very quickly and provides an excellent productivity.

Viscosity and Thixotropy are well stabilized, and stringing or sagging effects have been minimized during the high-speed dispenser application. Thus, eliminating the clogging of a syringe nozzle.

Main Properties

SPECIFICATIONS	AVERAGE VALUES	EQUIPMENT &TESTING
Color & State	Red color paste	Visual observation
Viscosity (at 25?)	600 – 900 dPa?s	Viscometer VT-04
Thixotropy (at 25?)	23 – 33(? 1/? 100)	Viscometer B-8U
Viscosity (at 30?)	400 Ps	Viscometer E-type
Thixotropy (at 30?)	5.0 (? 0. 5/? 5)	Viscometer E-type
Curing Condition	130? x 80 ~ 90 sec	Far Infrared Oven
Shelf Life	Within 3 months	Stored at 20?
Adhesive Strength	5.0 Kg or over	#2125 chip component
Solder Resistance	15 sec / Pass	260? in solder bath
TG temperature	110?	TMA method
Coefficient of Linear Thermal Expansion	5.0×10^{-5}	
Tensile Adhesive Strength	120 Kgf/cm^2	JIS K 6850
Volume Resistivity	2.0×10^{15} 0 cm	JIS K 6911
Dielectric Constant (1 MHz)	3.5	JIS K 6911
Dielectric Loss Tangent (1 MHz)	0.020	JIS K 6911

· The above information is based on our data believed to be reliable, but no warranties are implied or expressed to its accuracy.

Due to the single component heat-curing type without hardener, SA-35 must be stored at the temperature below 20? in cool and dark place. If exposed to the high temperature exceeding 40? , the product is likely to be gelled. Storing and room temperature of working area must be strictly observed for the good performance.

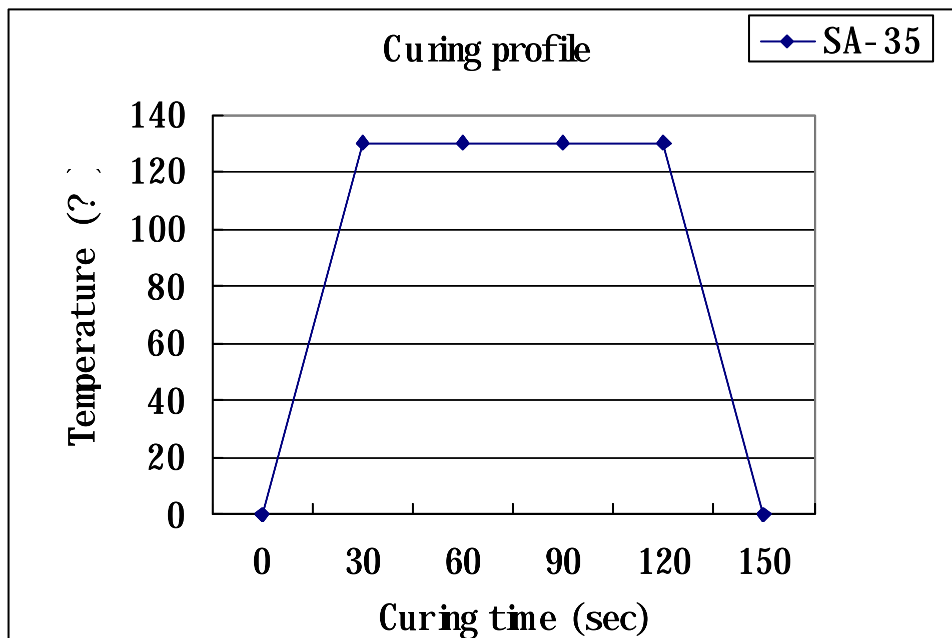
USAGE

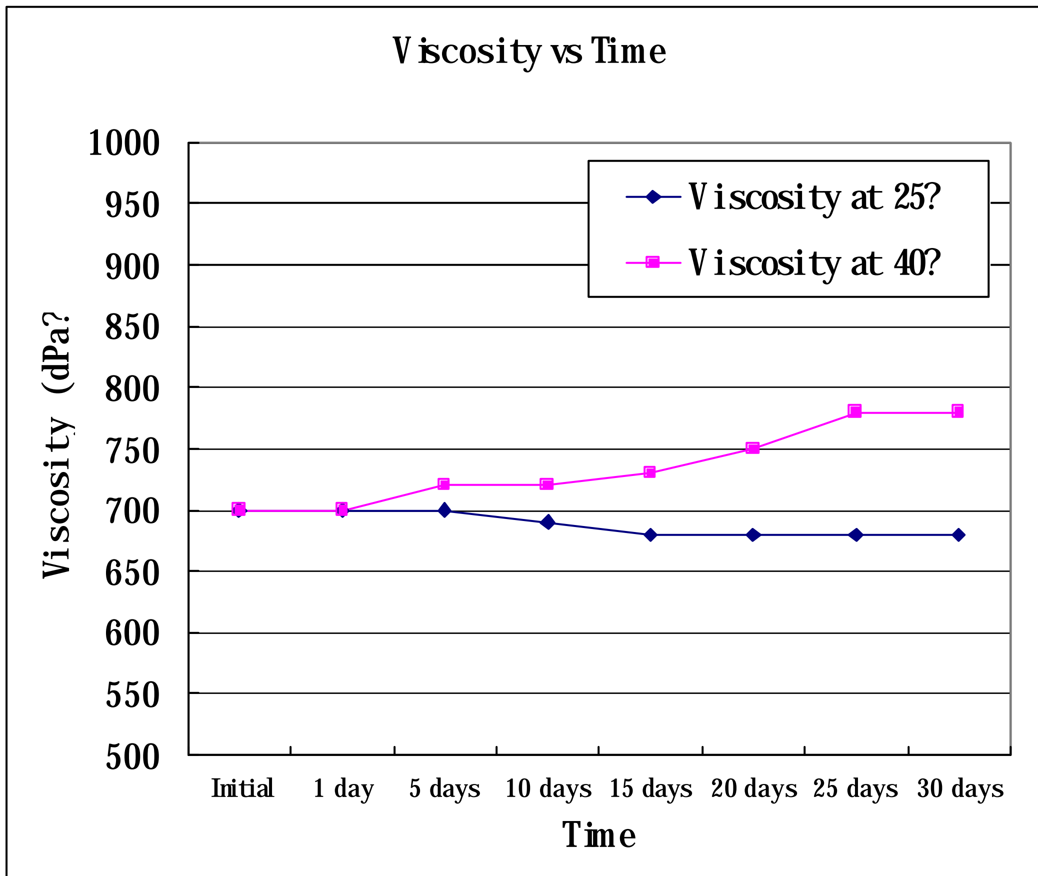
1. Dispenser or Pin transfer application is recommended.
2. Depending on the type of oven or curing equipment, optimum curing condition may vary and your own experiment at your facility is essential to ensure the best result.
3. Shelf life is 3 months at the temperature of 20? , however it is recommended to store it in a refrigerated condition to maintain stabilized viscosity and thixotropy.

CURING CONDITION & ADHESIVE STRENGTH

Substrate: 80mm x 120mm t=1.6mm Glass Epoxy (G-10)

* Temperature was randomly checked at two points on the surface of substrate material.



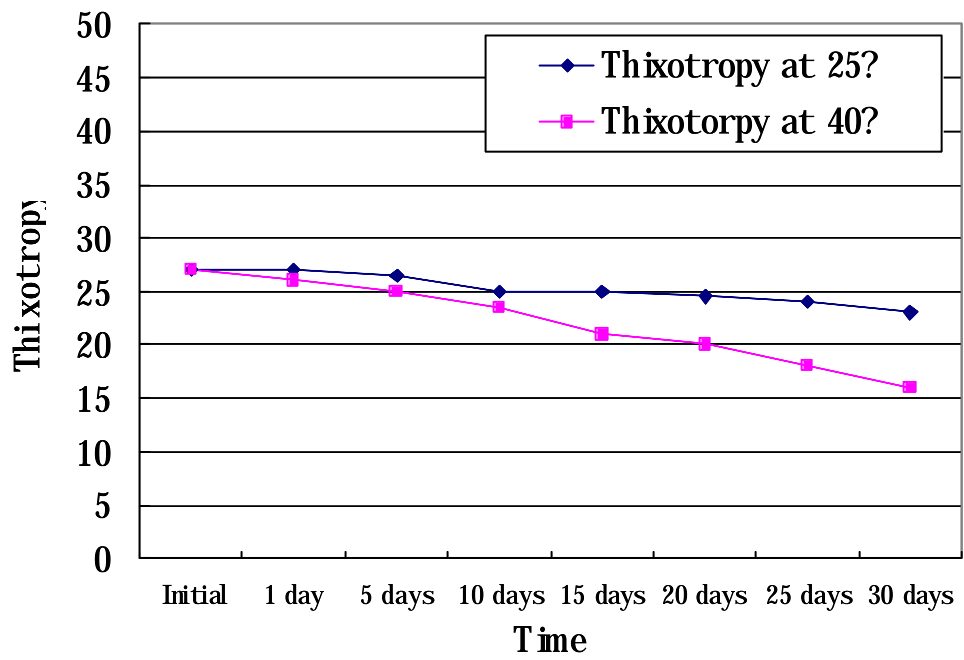


Adhesive strength: Under the above curing condition, four (4) different chip components were used to test the adhesive strength on the ceramic substrate board.

Descriptions of Chip Component	Adhesive Strength (Kg/piece)
#2121 Condenser	More than 5.0
#2125 Resistor	More than 5.0
Mini-mould IC	5.0
Glass diode	4.5

Amount of application: approximately 2mg per piece.

Figure is an average of 10 pieces tested for adhesive strength.


Thixotropy vs Time
50
45
40
35
30
25
20
15
10
5
0
Thixotropy
Thixotropy at 25?
Thixotorpy at 40?
Initial
1 day
5 days
10 days
15 days
20 days
25 days
30 days
Time