ES1512

Red Glue - Epoxy Adhesive for Chip bonder

ES1512 is a heat-cured adhesive that falls under the category of one-component epoxy adhesives. It has been specifically formulated for stencil printing and is known for its exceptional bonding strength, resilience in high humidity environments, impressive electrical performance, and reliable storage stability.

FEATURE

- Solvent-free, non-volatile, which offers excellent retention of electrical insulation properties under high humidity conditions.

- Medium viscosity and excellent thixotropy, which can be controlled flow and have sag resistance.

- Fast curing helps to shorten the working time

- Low stress, shrinkage, and water absorption

TYPICAL UNCURED PROPERTIES

Properties	ES1512
Appearance	Paste
Color	Red
Viscosity @25°C, Pas Brookfield RV, Spindle 7	280,000 ~ 380,000
Thixotropic Index	8
Density, g/cm^3	1.2

TYPICAL CURING PROPERTIES

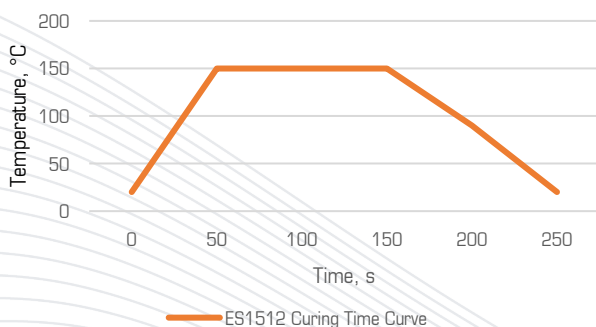| Properties	ES1512
Pot Life, 25°C, days	7
Through Cured Time 120°C by hot place, sec	90~120s
Through Cured Time 150°C by hot place, sec	60~90s

ES1512 Curing Time Curve

* Increasing the curing temperature and extending the curing time will result in a stronger bonding strength for the product. The recommended curing temperature and heating rate are depicted in the figure curve, indicating the time required for components to achieve optimal bonding strength at specific temperatures. Users can adjust the temperature parameters of the curing furnace based on the solidification characteristic curve of the adhesive and the heat efficiency of Reflow Ovens.

DIRECTION FOR USE

1. It is important to allow the product to return to room temperature before opening the aluminum foil package. For 300ml packaging, a recovery time of at least 4 hours is necessary, while for 30ml packaging, a minimum of 2 hours is required.

2. Recommend maintaining a drop pressure of 0.15-0.35 MPa and preheating the glue head to a temperature between 30-35 degrees Celsius.

3. If the equipment is not in use for an extended period, avoid inserting a needle with unused glue into the equipment and refrain from soaking it in solvent. Ensure timely cleaning.

4. Adhesive that has not dried and is stuck on electrical wires can be removed using acetone or propylene alcohol ethers.

5. Kindly close tightly and refrigerate between 2 and 8 degrees when not in use.

TYPICAL CURED PROPERTIES

Properties	ES1512
Hardness (Shore D)	85
Shear Strength, MPa	16.5
Tg (^{0}C), DSC	98
Dielectric strength, kV/mm	26.8
Surface resistance (Ohm)	$5.5*10^{16}$
Volume resistance (Ohm.cm)	$2.4*10^{15}$

Cure Condition: 150^{0}C/ 30 min

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Glue & Dispensing Technology

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STORAGE AND SHELF LIFE

This product should be kept without any possibility of wet and heat exposure. Shelf life of this product is 8 months when stored at -20°C ~ -5°C before opening the containers. Shelf life of this product is 6 months when stored at 0°C ~ 8°C before opening the containers. Before use, this product should be placed at 14~34°C for 1 to 2 hours. The properties will be changed when replace this product at room temperature for long time..

CAUTION

Some findings indicate a lack of potential for carcinogenicity with the compositions of this product by long term recurrent application to the skin. However, contact with skin is likely to produce mild transient reddening. It is important to remove adhesive from skin with soap and water thoroughly. DO NOT use solvents for cleaning hands. This resin is of moderate acute toxicity by swallowing. If swallowed, call a physician. Avoid contact with eyes. In case of contact, flush with water for at least 15 minutes and get medical attention immediately. For specific information on this product, consult the Material Safety Data Sheet.