

ES5300

One Component Epoxy Adhesive

ES5300 is a one component epoxy adhesive designed for electronic devices bonding. This resin is suited for curing between 100~110°C and exhibits high viscosity and excellent thixotropic. This product can be also controlled flow and have sag resistance. This product offers good handling, chemical resistance and perfect surface gloss. The durability of this resin is high levels, and this resin can pass many environmental test experiments.

FEATURE

- This resin offers excellent chemical resistance and solvent resistance.
- This product has high thixotropic index. It is able to hold the shape of resin without any failure and deformation.
- This resin has excellent retention of electrical insulation properties under high humidity conditions.
- The reactivity of this product is good at the temperature higher than 100°C.
- This product complies to the 2011/65/EU RoHS regulations.
- This product complies to chlorine < 900ppm, bromine < 900ppm, chlorine + bromine < 1500ppm.

TYPICAL UNCURED PROPERTIES

Properties	ES5300
Appearance	Liquid
Color	Red
Viscosity *25°C, cps S14, 3 rpm	> 230 000
Viscosity *25°C, cps S14, 0.3 rpm	> 1700 000
Thixotropic Index	> 7

TYPICAL CURING PROPERTIES

Properties	ES5300
Pot Life, 25°C, days	3
Through Cure Time 100°C, min	10

DIRECTION OF USE

1. It should be applied to a clean surface which is free of dirt, grease or mold release. In many cases, a simple solvent wipe is sufficient.
2. The package of this product which is refrigerated in -40~-5°C can be brought to ambient conditions by allowing to stand at room temperature 14~34 °C for 1 to 2 hours. Do not loosen container cover before temperature equilibration.

3. Cure time on the really part will depend upon factors such as part geometry, materials to be bonded, bond-line thickness and efficiency of the oven. Cure schedule should be confirmed with actual production parts and equipment.

TYPICAL CURED PROPERTIES

Properties	ES5300
Glass Transition Temp., (DSC), °C	110
CTE (*2) (<T _g), μm/m/°C	40
CTE (*2) (>T _g), μm/m/°C	180
Durometer Hardness, Shore D	83
Water Absorption Ratio (25°C/24hr), %	0.33
Water Absorption Ratio (80°C/24hr), %	1.11
Water Absorption Ratio (97°C/24hr), %	0.49
Shear Strength Al vs. Al, kgf/cm ²	60
Volume Resistivity, ohm-cm	5*10 ¹⁵
Surface Resistivity, ohm	5*10 ¹⁴
Dielectric Constant, 100Hz	3.8

(*1) Specimen Cure Condition: 100°C/ 10 min

(*2) CTE: Coefficient of Thermal Expansion

ES5300

Two-part Epoxy for Electronics Devices

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. this product 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.

STORAGE AND SHELF LIFE

This resin should be kept without any possibility of moisture and heat exposure. It should be storage at -40oC ~ -5oC before opening the containers. Shelf life of this product is eight months. Before using, it should place this product at 14~34oC for 1 to 2 hours. The properties will be changed when replace this product at room temperature for long time.

The data contained in this bulletin is provided only as a guide for evaluation/consideration. These material characteristics are typical properties that are based on a limited number of samples tested in the laboratory. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any product or method. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.