



One Component Epoxy Adhesive

Product Description

JC349-4 is a one component epoxy adhesive for the application of electronic devices. This resin develops tough, strong, structural bonds which provide excellent shear, peel and impact strength. This resin can be applied to the encapsulation of electronic products. The durability of this product is very high levels and this resin can pass many environmental test experiments.

Features

1. This product is solvent-free, non-volatile, system.
2. Cured resin has excellent protection and vibration resistance for electronic devices.
3. This product has excellent dimensional stability over a wide temperature range.
4. This resin offers excellent retention of electrical insulation properties under high humidity conditions.
5. The cured product of this product is effective against moisture and water.
6. The retained strength of this resin after environmental test experiments is excellent.
7. This product complies to the 2011/65/EU RoHS regulations.
8. This resin complies to chlorine < 900ppm, bromine < 900ppm, chlorine + bromine < 1500ppm.
9. This product obeys UL94V-0 regulations.

Typical Uncured Properties

	JC349-4
Appearance	Liquid
Color	Black
Viscosity 25°C, S14 10rpm,cps	45,000~85,000

Typical Curing Properties

Pot Life 25°C, days	7
Through Cure Time 120°C, min	40

Direction of Use

1. 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 for 1 to 2 hours. Do not loosen container cover before temperature equilibration.
2. This resin 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.
3. Cure time on the really part will depend upon factors such as part geometry, materials to be bonded, bondline thickness and efficiency of the oven. Cure schedule should be confirmed with actual production parts and equipment.

Typical Cured Properties*1

Glass Transition Temp.,(DSC), °C	130
CTE*2 (< Tg), µm/m/ °C	50
CTE*2 (> Tg), µm/m/ °C	160
Durometer Hardness, Shore D	89
Specific Gravity	1.48
Water Absorption Ratio (25°C /24hr), %	0.59
Water Absorption Ratio (80°C /24hr), %	2.06
Water Absorption Ratio (97°C /1.5hr), %	0.84
Degradation Temp. (TGA 10°C /min), °C	317
Weight Loss Ratio@100°C, %	0.17
Weight Loss Ratio@150°C, %	0.33
Weight Loss Ratio@200°C, %	0.47
Weight Loss Ratio@250°C, %	0.83
Weight Loss Ratio@300°C, %	2.99
Weight Loss Ratio@350°C, %	13.50
Volume Resistivity, ohm-cm	4.5*10 ¹⁵
Surface Resistivity, ohm	4.5*10 ¹⁴
Dielectric Constant 1KHZ	3.2

*1 Cure Condition : 120°C / 40min

*2 CTE: Coefficient of Thermal Expansion

Storage and Shelf Life

This resin should be kept without any possibility of moisture and heat exposure. It should be storage at -40°C ~ -5°C before opening the containers. This product has one year minimum shelf life. Before using, it should place this product 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 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.