



Epoxy for Electronic Devices of Low Temperature Cured

Product Description

JD971 is a one component epoxy for the application of electronic devices. This resin exhibits medium viscosity and cured under low temperature. This product exhibits excellent adhesion strength, chemical and solvent resistance. The crack and fatigue resistance of this resin are outstanding in many vibrational applications. This resin is suitable for low temperature curing and easy for working. This product is used widely in various areas in electronic devices and reinforcement.

Features

1. This product is a one component solvent-free system.
2. The hardening surface will not offer a surface oiliness and poor gloss.
3. This resin offers excellent retention of electrical insulation properties under high humidity conditions.
4. The retained strength of this product after environmental test experiments is excellent.
5. This resin has excellent dimensional stability over a wide temperature range.
6. This resin complies to the 2011/ 65/EU RoHS regulations.
7. This product complies to chlorine < 900ppm, bromine < 900ppm, chlorine + bromine < 1500ppm.

Typical Uncured Properties

Appearance	JD971
Color	Liquid
Viscosity 25°C, S14 50rpm, cps	Black
Thixotropic Index	12,000~18,000
	>1.8

Typical Curing Properties

Pot Life, 25°C, days	2
Through Cured Time, 60°C, min	60~120
Through Cured Time, 70°C, min	60
Through Cured Time, 80°C, min	40

Direction of Use

1. The package of this product which is refrigerated in refrigerator(-20°C ~ -5°C). Before use, please put the product in refrigeration (2 °C ~13 °C) for 1 hour and then put it at room temperature (14 °C ~34 °C) for 1~1.5 hour. Do not loosen container cover before temperature equilibration.
2. This product 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. Apply adhesive on both substrates to be bonded. Contact pressure is recommended during this product curing. For maximum bonding strength apply adhesive evenly to both surfaces to be jointed.

4. 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)*1, °C	106
Glass Transition Temp., (DSC) *2, °C	110
Glass Transition Temp., (DSC) *3, °C	109
CTE*4 (<Tg) ,µm/m/ °C	64
CTE*4 (>Tg) ,µm/m/ °C	218
Specific Heat 0°C, J/g°C	1.5
Specific Heat 25°C, J/g°C	1.38
Specific Heat 50°C, J/g°C	1.72
Specific Heat 75°C, J/g°C	1.78
Durometer Hardness, Shore D	83
Specific Gravity	1.21
Water Absorption Ratio (25°C /24hr), %	0.22
Water Absorption Ratio (80°C /24hr), %	2.16
Water Absorption Ratio (97°C /1.5hr), %	1.11
Shear Strength*1, Al vs. Al., kg/cm ²	59
Shear Strength*2, Al vs. Al., kg/cm ²	67
Shear Strength*3, Al vs. Al., kg/cm ²	138
Degradation Temp. (TGA 10°C /min), °C	355
Weight Loss Ratio @ 100 °C, %	< 0.5
Weight Loss Ratio @ 150 °C, %	< 0.5
Weight Loss Ratio @ 200 °C, %	< 0.5
Weight Loss Ratio @ 250 °C, %	< 0.5
Weight Loss Ratio @ 300 °C, %	1.15
Weight Loss Ratio @ 350 °C, %	4.49
Volume Resistivity, ohm-cm	4.5*10 ¹⁵
Surface Resistivity, ohm	4.5*10 ¹⁴

*1 Specimen Cure Condition : 60°C/ 60min

*2 Specimen Cure Condition : 70°C/ 60min

*3 Specimen Cure Condition : 80°C/ 60min

*4 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 -20°C ~ -5°C before opening the containers. Shelf life of this product is six months. Before using, it should place this product at 14~34°C for 1 to 1.5 hours, and please use it within 2 days. The viscosity and 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.

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.