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Technical Data Sheet

JD 474-14

Epoxy for Optics and Electronic Devices

Product Description

JD474-14 is a one component epoxy for the application of fiber optics and electronic devices. This resin is easy to operate and exhibits perfect bonding for different substrates. For its performance and reliability, this product is used widly in various areas and especially for optical fiber bonding.

Features

1. This product has high Tg.
2. This resin is easy to use without mixing, and reduce the working time and increase the efficiency at the same time.
3. Cured product has good surface gloss.
4. This product will not release by-products and exhibit low volume shrinkage during curing.
5. This resin offers excellent chemical resistance and solvent resistance.
6. Cured product is effective against moisture and water.
7. This product complies to the 2011/ 65/EU RoHS regulations.

Typical Uncured Properties*

	JD474-14
Appearance	Liquid
Color	Milky
Viscosity 25°C, S14 10 rpm, cps	90,000
Thixotropic Index	>1.3

*This data is a reference value, and the actual data is based on COA.

Typical Curing Properties

Pot Life, 25°C, days	24
Recommended Wavelength, nm	310~365
Minimum Light Intensity, mW/cm^2	> 50
Minimum Light Energy, mJ/cm^2	3,000~6,000
Post Cure Time,100 °C, min	1

*Avoid the resin exposure to light and heat.

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 resin which is refrigated in -40°C ~ -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.
3. Cure time on the really part will depend upon fators 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.
4. After heat curing stage, cool down the part gradually can minimize the thermal stress.
5. Certain materials may inhibit the cure of this product when placed in contact with the uncured resin. Materials such as amines, amine cured epoxies, polyurethane, etc., are some which may cause inhibition. Even surfaces which have been in contact with such materials may cause it. If in doubt, a patch test should be done.

Typical Cured Properties*

Glass Transition Temp.,(MDSC), °C	>110
Durometer Hardness, Shore D	79
Specific Gravity	1.64
Water Absorption Ratio (25°C /24hr), %	0.63
Water Absorption Ratio (80°C /24hr), %	0.64
Water Absorption Ratio (97°C /1.5hr), %	0.48
Degradation Temp. (TGA 10°C /min), °C	332
Weight Loss Ratio@100°C, %	0
Weight Loss Ratio@150°C, %	0.08
Weight Loss Ratio@200°C, %	0.49
Weight Loss Ratio@250°C, %	1
Weight Loss Ratio@300°C, %	1.98
Weight Loss Ratio@350°C, %	6.90

*Specimen Cure Condition ： 6,000mJ/cm^2 + 100 °C/1hr

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. Shelf life of this product is six months. 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 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.