

UV5106H

Epoxy for Optics and Electronic Devices

UV5106H 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 widely in various areas and especially for optical fiber bonding.

FEATURE

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

DIRECTION OF USE

- 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.
- The package of this resin which is refrigerated 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.
- 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.
- After heat curing stage, cool down the part gradually can minimize the thermal stress.
- 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 UNCURED PROPERTIES

Properties	UV5106H
Appearance	Liquid
Color	Milky
Viscosity *25°C, cps	90 000 S14, 10 rpm
Thixotropic Index	> 1.3

TYPICAL CURING PROPERTIES

Properties	UV5106H
Pot Life, 25°C, days	24
Recommended Wavelength, nm	310-365
Minimum Light Intensity, mW/cm ²	>50
Minimum Light Energy, mJ/cm ²	3000 – 6000
Post Cure Time, 100 °C, min	1

TYPICAL CURED PROPERTIES

Properties	UV5106H
Glass Transition Temp., (DSC), °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

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TYPICAL CURED PROPERTIES

Properties	UV5106H
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

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.

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.