

Water-resistant Photo-curing Adhesive for Glass Bonding

Product Description

GA006 is a photo-curing adhesive that can cure rapidly under the ultraviolet light (365nm) or the visible light (436nm) and exhibit excellent adhesion strength. Upon customer needs, Everwide Chemical Company customizes and designs this water resistant UV adhesive for glass bonding. Ordinary cured photo-curing adhesive will yellow under heat during the transportation process, which affects the overall appearance of customer products. In the other hand, this ECC product has good toughness and thermal shock resistance; additionally, it will not yellow after heat-curing at 80°C for a month. Furthermore, this resin will not exhibit cohesive failure after immersing in hot water (80°C) for two months or in room temperature (25°C) water for two years. This product passed many severe environmental test experiments, and it is proven to be a reliable product with stable quality. Everwide also designs a series of this photo-curing product line, including GA004, GA006, GA024, GA058 and GA085, with different viscosity and hardness for the application of glass T type bonding with water resistance. For specific information on this series of products, please refer to the Technical Data Sheet.

Features

1. This product exhibits excellent transparency, toughness, shock resistance and thermal shock resistance after curing.
2. This resin is stable and shows good weather as well as aging resistance.
3. This resin is water-resistant and will not leak in application of glass T type bonding during long term environmental test experiments.
4. This product complies to the 2011/ 65/EU RoHS regulations.

Typical Uncured Properties

Appearance	GA006
Color	Liquid
Viscosity 25°C, S14 50rpm, cps	Colorless
Solvent Content, %	6,400~9,600
Heavy Metal Content, %	0

Typical Curing Properties

Recommended Wavelength, nm	310~365
Minimum Light Intensity, mW/cm ²	> 50
Minimum Light Energy, mJ/cm ²	1,500~3,000

*Avoid the resin exposure to light.

Direction of Use

1. Clean the contact surface until it is free of dirt, grease or mold release. Generally, a simple solvent wipe is sufficient.
2. Real curing time depends on various factors, such as part geometry, materials to be bonded, bondline thickness and efficiency of the UV light. Confirm the real curing time and

- conditions with actual production parts and equipment.
3. Please standardize the UV lamp intensity and illumination. Over-exposure will not affect the product quality; however, under-exposure will severely change the resin properties. When under-exposure, the resin may have lower reaction rate and may not pass the environmental test experiments.
4. This product may cause skin irritation to sensitive personnel.

Typical Cured Properties

Glass Transition Temp.(MDSC), °C	-16
Durometer Hardness, ShoreD	67
Elongation, %	173
Working Temperature Range, °C	-40~120

Mechanical Test

Tensile strength



Substrate failure



Test specimen: Tempered glass/ tempered glass; combine with aluminum

Size: Length 30mm x Width 25mm x Thickness 3mm
Test area is ~1 cm²

Test report

Item	Specimen cm ²	Maximum Strength, kgf	Bonding Strength kgf/cm ²	Description of Material Failure
GA006	1.25	101.54	81.23	Substrate Failure
GA006	1.28	103.11	80.61	Cohesive Failure
GA006	1.18	77.38	65.53	Cohesive Failure
GA006	1.33	91.73	68.77	Cohesive Failure
GA006	1.30	90.56	69.66	Cohesive Failure
Average	1.27	92.87	73.14	

Test result



Storage and Shelf Life

This product should avoid any direct light exposure. Replace the lid immediately after use to prevent possible light exposure. Shelf life of this product is one year when stored under shades, room temperature (14-34°C), and in sealed containers.

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.

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.