



Photo-curing Adhesive for C-MOS Lens Holder Bonding

Product Description

FR345-16 can fast cure under ultraviolet light(365nm). Cured resin has toughness and thermal shock resistance. This product is well suited for C-MOS plastic lens holder bonding. This resin has good adhesion strength.

Features

1. This resin shows high quality and passes many kinds of environmental test experiment.
2. This product has excellent toughness, good shock and thermal shock resistance.
3. This resin has good weather resistance and aging resistance.
4. This product has high-strength adhesion to plastic and plastic substrate.
5. The resin can be reworked without residual shavings, and the adhesive has strong cohesion
6. This product complies to the 2011/ 65/EU RoHS regulations.
7. This product complies to chlorine < 900ppm, bromine < 900ppm, chlorine + bromine < 1500ppm.

Typical Uncured Properties

	FR345-16
Chemical composition	Acrylic resin
Appearance	Liquid
Color	Yellow and Opaque
Viscosity* 25°C, S14 100rpm, cps	8,000~15,000
Viscosity* 25°C, S14 10rpm, cps	30,000~50,000
Thixotropic Index	>3
Specific Gravity@25 °C	1.01
Refractive index nD@25.3 °C	1.4795
Solvent Content, %	0

*This value is for reference. Please refer to COA for the actual value.

Typical Curing Properties

Curing Equipment: Mercury Lamp / Halogen Lamp	
Recommended Wavelength, nm	310~420
Minimum Light Intensity, mW/cm ²	> 50
Minimum Light Energy, mJ/cm ²	1,500~2,000

Curing Equipment: LED Light	
Recommended Wavelength, nm	365~420
Minimum Light Intensity, mW/cm ²	> 50
Minimum Light Energy, mJ/cm ²	2,000~3,000

*The minimum light energy is for reference.

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. For maximum bonding strength apply adhesive evenly to both surfaces to be jointed.

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 UV light. Cure schedule should be confirmed with actual production parts and equipment.
4. Please standardize the UV lamp intensity and illumination. Over exposure will not affect the resin properties, but the resin properties will be changed if there is not enough exposure. The resin may have lower reaction rate and may not pass the environmental test experiments.

Typical Cured Properties

Glass Transition Temp.,(TMA), °C	23
CTE* (<Tg), μm/m/°C	218
CTE* (>Tg), μm/m/°C	422
Durometer Hardness ASTM D2240-03, Shore D	34
Durometer Hardness ASTM D2240-03, Shore A	79
Refractive index nD@25.4 °C	1.5098
Shear Strength PC vs. PC, MPa	112

* CTE: Coefficient of Thermal Expansion

Storage and Shelf Life

This product should be kept without any possibility of light exposure. Replace the lid immediately after use. Shelf life of this product is six months when stored in dark place below 14~34°C in original, unopened 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.