

# UV 766-1

## UV-Vis Curable Epoxy

### Description

UV 766-1 is a fast cure, high viscosity UV-Vis curable epoxy system. The cured material has excellent flexibility, good toughness and good adhesion to a variety of substrates including metals and plastics. It has low odor, and low skin and eye irritation potential. It does not contain volatiles and is very suitable for electronic applications. It is not inhibited by oxygen during UV cure. The thixotropy has been adjusted to control excessive overflow.

### Applications

- UV-Vis curable adhesive for plastics and metals.

### Guidelines for Use

- Thaw the epoxy to room temperature (25°C) before use.
- Dispense the epoxy by using a syringe.
- Wipe off any excess uncured adhesive with a piece of dry cloth or tissue. Further cleaning may be achieved with tissue dabbed with isopropanol alcohol (IPA).
- Expose the epoxy to long UV wavelength light in the 320-500 nm range at 500mW/cm<sup>2</sup> for 20 seconds.
- If necessary, ultimate properties may be obtained faster by additional curing of the epoxy in a convection oven at 120°C or higher temperature for 30 minutes or longer period.

### Properties

Property	Test Method	Unit	Typical Value
Chemical type			Epoxy
Appearance	Pen 10		Orange red liquid
Mix ratio, by weight			One component
Shelf life, -20°C	Pen 26	Month	6
Pot life, 25°C	Pen 57	Day	7
Viscosity, 25°C, 5rpm	Pen 44	cP	16,000
Relative Thixotropic Index	Pen 37	-	2
Flow Test 45 degree, 25°C, 30min	Pen 15	mm	0
Refractive index, 25°C, 589nm	Pen 28	-	1.515
Hardness	Pen 29	Shore D	93
Die Shear Strength_UV_ metal chip to glass <sup>*a</sup>	Pen 36	kgf	3.0
Die Shear Strength_UV+Heat_ metal chip to glass <sup>*a</sup>	Pen 36	kgf	6.6
Tg	Pen 64	°C	91
CTE, alpha-1	Pen 64	ppm/K	55
CTE, alpha-2	Pen 64	ppm/K	189

<sup>\*a</sup> Bonding area of 0.34cmx 0.17cm

### Recommended Cure

#### Pre-cure

Wavelength: 320nm to 500nm

Intensity (mW/cm <sup>2</sup> )	Cure time (sec)
500	20sec

#### Post cure

Temp.	Cure Time
120 °C	30 min

### Storage

Tightly close original container of unused product. Store below -20°C. Storing at lower temperatures down to -40°C may prolong shelf life beyond 6 months. However it may take longer time to thaw the product.

### Packaging

- 5ml Black EFD Syringe
- 10ml Black EFD Syringe
- 30ml Black EFD Syringe

### Environment, Health & Safety

This product is RoHS compliant. It does not contain any known carcinogenic, mutagenic or teratogenic components.

### Contact Information

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