

ET3201

Two-part Epoxy for Electronic Devices

ET3201 is two-component epoxy which exhibits low viscosity, easy to handle, excellent chemical resistance and perfect surface gloss. This product is suitable for various applications in electronics, such as potting, casting, sealing, encapsulating and bonding. ET3201 is ideally used for general purpose which require long work life.

FEATURE

- The hardener of ET3201 will not yield an insoluble & whitish solid when exposing to air.
- The curing surface will not oily and poor gloss
- Excellent insulation properties even under high humidity
- Long working time of ~ 8 hours
- Excellent chemical and solvent resistance
- Comply to the 2011/65/EU RoHS regulations

TYPICAL UNCURED PROPERTIES

Properties	ET3201-A	ET3201-B
Appearance	Liquid	Liquid
Color	Colorless	Colorless
Viscosity *25°C, cps	3,000~5,000 S14, 100rpm	10 S14, 100rpm
Specific Gravity	1.16	0.98

TYPICAL CURING PROPERTIES

Properties	
Mix Ratio (A:B) by Weight	100 : 33
Pot Life, 25°C, hr	8
Through Cured Time, 25°C, day	2
Through Cured Time, 80°C, hr	3

DIRECTION OF USE

1. Mix thoroughly by weight 100:33. Mix approximately 15 seconds after uniform color is obtained.
2. For large scale casting, ET3201 is suggested to be precured at lower temperature, then full curing at higher temperature to avoid extremely heat release.
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 oven. Cure schedule should be confirmed with actual production parts and equipment.

TYPICAL CURED PROPERTIES^{*1}

Glass Transition Temp., (DSC), °C	90
CTE ^{*2} (<T _g), μm/m/ °C	38
CTE ^{*2} (>T _g), μm/m/ °C	230
Durometer Hardness, Shore D	76
Water Absorption Ratio (25°C/24hr), %	1.59
Water Absorption Ratio (80°C/24hr), %	2.32
Water Absorption Ratio (97°C/1.5hr), %	1.96
Water Absorption Ratio (25°C/94%RH/30days), %	0.01
Shear Strength Al vs Al, kg/cm ²	180
Tensile Strength MPa	50
Tensile Modulus MPa	900
Elongation, %	10
Toughness, J/m ²	5.0
Notched Izod Impact Strength, J/m	5.9
Degradation Temp, (TGA 10°C /min), °C	324
Weight Loss Ratio@100°C, %	0
Weight Loss Ratio@150°C, %	0
Weight Loss Ratio@200°C, %	0
Weight Loss Ratio@250°C, %	0.5
Weight Loss Ratio@300°C, %	2.7
Thermal Conductivity w/mk	0.3
Thermal Resistance m ² k/w	0.01
Spectral Transmission@1,200-4,000nm,%	80
Spectral Transmission@900-1,200nm,%	80
Spectral Transmission@550-900nm,%	> 96
Volume Resistivity , ohm-cm	4.5*10 ¹⁵
Surface Resistivity , ohm	5*10 ¹⁴
Dielectric Constant 100Hz	4.1

*1 Specimen Cure Condition: 80oC / 1hr

*2 CTE: Coefficient of Thermal Expansion

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STORAGE AND SHELF LIFE

The container should be stored in cool and dark place. The resin and hardener will become yellow under the sunlight. Replace the lid immediately after use. Keep without any possibility of wet when not using. Shelf life of this product is six months when stored 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 resin 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.