



Epoxy for Electronic Devices Potting

Product Description

JA293-2 is two component epoxy for electronic devices potting. This resin exhibits good handling, chemical resistance and perfect surface gloss. Ideal for general purpose industrial utilities requiring extended work life. A clean surface can be applied, the precise ratio while mixing Part A and Part B, and complete mixing of these two components are required to obtain optimum properties. The durability of this product is very high levels and this resin can pass many environmental test experiments.

Features

1. This resin has low viscosity and fluidity. It is good for potting.
2. This product has low viscosity and is good for potting. Cured product has good surface gloss.
3. This resin produces no exotherm in 5-10 gram masses and very slight exotherm in larger masses.
4. This product complies to the 2011/65/EU RoHS regulations.
5. This product obeys UL94V-0 regulations.

Typical Uncured Properties

	JA293-2A	JA293-2B
Appearance	Liquid	Liquid
Color	Black	Colorless
Viscosity 25 °C, S14 10rpm, cps	55,000~85,000	< 100
Thixotropic Index	> 3	-----
Mixing Viscosity 25°C, S14 100rpm, cps	2,400~4,000	
Specific Gravity	2.08	0.98

Typical Curing Properties

Mix Rate (A:B) By Weight	100 : 8
Pot Life, 25°C, hr	6
Tack Free Time, 25°C,hr	24
Through Cure Time, 25°C, days	5~7
Cure Time, 80°C, min	60
Cure Time, 100°C, min	40~45
Cure Time, 120°C, min	20~25
Cure Time, 150°C, min	10~15

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. Mix thoroughly by weight 100 : 8. Mix approximately 15 seconds after uniform color is obtained.
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.
4. For large scale application, it is suggested to be precured at lower temperature, then full curing at high temperature to avoid extremely heat release.

Typical Cured Properties*1

Glass Transition Temp.,(MDSC),°C	25
CTE*3 (40~55 °C), μm/m/ °C	1.78
CTE*3 (100~125 °C), μm/m/ °C	93
Durometer Hardness, Shore D	76
Water Absorption Ratio(25 °C /24hr), %	0.30
Water Absorption Ratio(80 °C /24hr), %	0.67
Water Absorption Ratio(97 °C /1.5hr), %	0.57
Shear Strength *1 Al vs. Al, kgf/cm ²	108
Shear Strength *1 Al vs. Glass, kgf/cm ²	98
Shear Strength *1 Glass vs. Glass, kgf/cm ²	136
Shear Strength *2 Al vs. Al, kgf/cm ²	80
Shear Strength *2 Al vs. Glass, kgf/cm ²	45
Shear Strength *2 Glass vs. Glass, kgf/cm ²	56
Degradation Temp, (TGA 10°C /min) °C	348
Weight Loss Ratio @ 100°C, %	0.14
Weight Loss Ratio @ 150°C, %	0.60
Weight Loss Ratio @ 200°C, %	1.17
Weight Loss Ratio @ 250°C, %	1.61
Weight Loss Ratio @ 300°C, %	3.51
Thermal Conductivity, W/mK	1.0
Volume Resistivity, ohm-cm	4.5*10 ¹⁵
Surface Resistivity, ohm	4.5*10 ¹⁴
Dielectric Constant 100Hz	4.1

*1 Specimen Cure Condition: 80°C / 1hr

*2 Specimen Cure Condition: 25°C / 7days

*3 CTE: Coefficient of Thermal Expansion

Storage and Shelf Life

The container should be stored in cool and dark place. The resin and hardener will become yellow under the sunlight. This product is mercaptan content, replace the lid immediately after use. Keep without any possibility of wet when not using. Shelf life of this product is one year 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 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 more information, refer to the Material Safety Data Sheet.