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Technical Data Sheet

JA 940-23

Epoxy for Potting and Bonding

Product Description

JA940-23 is two-component epoxy for structural materials. This product exhibits excellent operativity that can form great bonding with many different materials. This product can fast cure at low temperature and it can reduce the working time and increase the efficiency at the same time. This product is regarded as the high performance adhesive representative since its specialities and reliability which can be applied in many areas.

Features

1. This product exhibits excellent toughness, low thermal stress, and thermal shock resistance.
2. This product offers excellent retention of electrical insulation properties under high humidity conditions.
3. The hardener of this product which is exposured in air will not yield a insoluble, whitish solid.
4. The hardening surface of cured product will not exhibit a surface oiliness and poor gloss.
5. This product is suited for electronic encapsulation and casting.
6. This product complies to the 2011/65/EU RoHS regulations.
7. This product complies to the UL94V-0 regulations.

Typical Uncured Properties

	JA940-23A	JA940-23B
Appearance	Liquid	Liquid
Color	Black	Milky to creamy
Viscosity 25°C, cps	12,000~18,000 S14 20rpm	20,000~30,000 S14 20rpm
Viscosity 25°C, cps	28,000~44,000 S14 2rpm	44,000~66,000 S14 2rpm
Thixotropic Index	3~4	2.2
Specific Gravity	1.45	1.33

Typical Curing Properties

Mix Ratio (A：B) by Weight	2：1
Pot Life, 25°C, hr	1~2
Surface Dry Time, 25°C, hr	8
Through Cure Time, 25°C, day	5~7

Direction of Use

1. Weight the correct propertions to within 2% accuracy and mix thoroughly together, scraping both the bottom and the sides of mixing container, until a homogeneous mixture is obtained.
2. Bonding surfaces should be clean, dry and properly prepared.
3. For optimum properties mixed, this product should be used before its pot life.
4. For maximum bonding strength apply adhesive evenly to both surfaces to be jointed.
5. Cure time on the real part will depend on 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., (MDSC),°C	55
Glass Transition Temp., (TMA),°C	66
CTE*2 (<Tg) , μ m/m/℃	49
CTE*2 (>Tg) , μ m/m/℃	184
Durometer Hardness, Shore D	85
Specific Gravity	1.36
Water Absorption Ratio(25 °C/ 24hr), %	0.3
Degradation Temp, (TGA 10°C/min), °C	337
Weight Loss Ratio @100°C, %	0
Weight Loss Ratio @150°C, %	0
Weight Loss Ratio @200°C, %	0
Weight Loss Ratio @250°C, %	0.2
Weight Loss Ratio @300°C, %	2.3
Weight Loss Ratio @350°C, %	6.3
Volume Resistivity, ohm-cm	$5*10^{15}$
Surface Resistivity, ohm	$5*10^{14}$
Dielectric Constant, 100Hz	4.5
Temperature Range, ℃	-40 ~ 105

*1 Specimen Cure Condition：80°C / 1hr
*2 CTE: Coefficient of Thermal Expansion

Storage and Shelf Life

This product should be stored in cool and dark place. The resin and hardener will become yellow under the sunlight. Part B is amine-content, replace the lid immediately after use. Keep without any possibility of moisture when not use. Shelf life of this product is 1 year when stored at 14~34°C in the original and 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 Safety Data Sheet.