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Technical Data Sheet

JA 723-5

Epoxy for Potting

Product Description

JA723-5 is a two-component epoxy resin. This product and its hardener will react rapidly after mixing and demonstrate outstanding adhesion strength. This product exhibits excellent toughness, low thermal stress, and impact resistance. A clean surface can be applied, the precise ratio while mixing Part A and Part B, and complete mixing of these two components is required to obtain optimum properties.

Features

1. This product exhibits excellent toughness, low thermal stress, and impact resistance.
2. The hardening surface of this product will not exhibit surface oiliness and poor gloss.
3. This product has no volatile materials and will not release toxic volatilizations.
4. This product complies with the 2011/65/EU RoHS regulations.
5. This product complies to chlorine <900ppm, bromine <900ppm, chlorine + bromine <1500ppm.

Typical Uncured Properties

	JA723-5A	JA723-5B
Appearance	Liquid	Liquid
Color	Black	Yellow
Viscosity 25°C, cps	12,000~20,000	170~300
	S14 20rpm	S21 50rpm
Specific Gravity	1.50~1.60	1.05

Typical Curing Properties

Mix Ratio (A : B) by Volume	4 : 1
Mix Ratio (A : B) by Weight	6 : 1
Through Cure Time, 25°C, day	5~7
Surface Dry Time, 25°C, hr	8
Pot Life 25°C, hr	1

Direction of Use

1. Weight the correct proportions to within 3% accuracy and mix thoroughly, scraping the bottom and sides of the mixing container until a homogeneous mixture is obtained.
2. Mix thoroughly by volume 4 : 1 or weight 6 : 1. Mix approximately 15 seconds after uniform color is obtained.
3. Bonding surfaces should be clean, dry, and adequately prepared.
4. This product should be used before its pot life for mixed optimum properties.
5. Cure time on the actual part will depend on factors such as part geometry, materials to be bonded, bond line thickness, and the oven's efficiency. The cure schedule should be confirmed with actual production parts and equipment.

Typical Cured Properties

Glass Transition Temp. (DSC), °C	40
CTE* (35~50°C) , μ m/m/ °C	51.7
CTE* (80~160°C) , μ m/m/ °C	168
Durometer Hardness, Shore D	78
Water Absorption Ratio (25°C /24hr), %	0.17
Water Absorption Ratio (80°C /24hr), %	1.03
Water Absorption Ratio (97°C /1.5hr), %	0.34
Degradation Temp, (TGA 10°C/min), °C	207
Weight Loss Ratio @100°C, %	0.2
Weight Loss Ratio @150°C, %	1.8
Weight Loss Ratio @200°C, %	4.7
Weight Loss Ratio @250°C, %	8.1
Weight Loss Ratio @300°C, %	13.2
Thermal Conductivity, W/mK	0.3
Volume Resistivity, ohm-cm	$4.5*10^{15}$
Surface Resistivity, ohm	$4.5*10^{14}$
Dielectric Constant, 100Hz	4.1

*CTE: Coefficient of Thermal Expansion

Storage and Shelf Life

This product should be stored in a cool and dark place. The resin and hardener will become yellow in sunlight. Replace the lid immediately after use. When not in use, keep it without any possibility of being wet. The shelf life of this product is 1 year when stored below 14~34℃ in original, unopened containers.

Caution

Some findings indicate a lack of potential for carcinogenicity with the compositions of this product due to long-term recurrent application to the skin. However, contact with skin is likely to produce mild transient reddening. Removing adhesive from the skin thoroughly with soap and water is important. DO NOT use solvents for cleaning hands. This product has moderate acute toxicity when swallowed. 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 or 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.