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Technical Data Sheet

JB 267-12

Epoxy for Optical and Electronic Devices

Product Description

JB267-12 is a two component epoxy for the application of fiber optics, semiconductor, electronic and medical devices. This resin is easy to operate and exhibits perfect bonding for different substrates. For its performance and reliability, this product is used widly in various areas.

Features

1. This product offers long term working time after mixing.
2. This resin is easy to operating, quick defoam, excellent fluidity and good surface gloss.
3. This resin also offers excellent chemical resistance and solvent resistance.
4. This resin has an amber color change upon cure for easy visual inspection.
5. The thermal characteristics of this product are low outgassing and high temperature resistance.
6. This product complies to the 2011/65/EU RoHS regulations.

Typical Uncured Properties

	JB267-12A	JB267-12B
Appearance	Liquid	Liquid
Color	Light yellow	Yellow
Viscosity 25°C, S14 100rpm, cps	2,500~4,600	1,000~1,700
Mixing Viscosity 25°C, S14 100rpm, cps	2,000~3,000	
Particle Size	N.A	

Typical Curing Properties

Mix Ratio (A:B) by Weight	10 : 1
Pot Life 25°C, hr	3
Cure Time 80°C,min	40
Cure Time 100°C,min	10
Cure Time 120°C,min	5
Cure Time 150°C,min	2

Mixing Viscosity*

Time(hr)	Viscosity (cps)
0	2,537
1	4,063
2	6,563
3	10,450

Resin temperature: 25°C, Resin weight: 4.4g, Viscosimeter type: BrookField DV-I

Direction of Use

1. Mix thoroughly by weight 10:1. Mix approximately 15 seconds after uniform color is obtained.
2. For optimum properties mixed, it should be used before its pot life.
3. For large scale casting, this product is suggested to be precured in lower temperature, then full curing in higher temperature to avoid extremely heat release.
4. Cure time on the really part will depend upon fatcors such as part geometry, materials to be bonded, bondline thickness and efficiency of the oven. Cure schedule should be with actual production parts and equipment.

Typical Cured Properties*1

Glass Transition Temp.,(MDSC), °C	113
CTE*3 (< Tg) ,μm/m/ °C	58
CTE*3 (> Tg), μm/m/ °C	200
Specific Heat 25°C, J/g°C	0.9
Specific Heat 50°C, J/g°C	1.1
Specific Heat 75°C, J/g°C	1.2
Specific Heat 100°C, J/g°C	1.4
Durometer Hardness, Shore D	86
Specific Gravity	1.22
Water Absorption Ratio (25°C /24hr), %	0.08
Water Absorption Ratio (80°C /24hr), %	4.32
Water Absorption Ratio (97°C /1.5hr), %	1.54
Shear Strength Al VS. Al, kgf/cm^2	267
Shear Strength*2 Al VS. Al, kgf/cm^2	335
Shear Strength*2 Glass VS. Glass, kgf/cm^2	154
Degradation Temp., (TGA 10°C /min), °C	372
Weight Loss Ratio@100°C, %	0
Weight Loss Ratio@150°C, %	1.2
Weight Loss Ratio@200°C, %	1.2
Weight Loss Ratio@250°C, %	1.5
Weight Loss Ratio@300°C, %	2.2
Weight Loss Ratio@350°C, %	3.9
Thermal Conductivity W/mK	0.3
Thermal Resistance m^{2}K/W	0.01
Volume Resistivity ohm-cm	4.5*10^{15}
Surface Resistivity ohm	4.5*10^{14}
Dielectric Constant 1KHz	3.2

*1 Specimen Cure Condition : 100°C/ 20min
*2 Specimen Cure Condition : 85°C, 85%RH, 1000hr
*3 CTE: Coefficient of Thermal Expansion
*4 Specimen Cure Condition : 120°C/ 30min

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 imidozale content, replace the lid immediately after use. Keep without any possibility of wet when not using. This product has a one year minimum shelf life 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 doctor. Avoid contact with eyes. In case of contact, flush with water for at least 15 minutes and get medical attention. For specific information on this product, consult the Material Safety Data Sheet.