



## High Performance Epoxy Adhesive

### Product Description

JD050-27 is a two-component epoxy with medium viscosity, toughness. This resin exhibits toughness and fatigue resistance. This product is suitable for different substrates, including plastics, woods, metals, glass, carbon fibers and ceramics. The durability of this product is very high levels and this resin can pass many environmental test experiments. For its characteristic and reliability, this product is used widely in various areas, as a high performance adhesive.

### Features

1. The retained strength of this product after environmental test experiments is still excellent.
2. This product offers outstanding shear strength.
3. Cured product exhibits has excellent resistance for chemical and solvent.
4. Cured product exhibits excellent toughness and fatigue resistance.
5. This product complies to the 2011/65/EU RoHS regulations.

### Typical Uncured Properties

	JD050-27A	JD050-27B
Appearance	liquid	liquid
Color	Milky	Yellow
Viscosity 25°C, cps	9,000~14,000	20,000~75,000
	S14 20rpm	S14 3rpm
Specific Gravity	1.16	0.99

### Typical Curing Properties\*

Mix Ratio (A : B) by Weight	2 : 1
Pot Life, 25 °C, min	30
Tacky Time, 25°C, hr	2
Through Cure Time, 25°C, day	5~7
Through Cure Time, 80°C, min	60

\*A : B = 2g : 1g

### Direction of Use

1. It should be applied to a clean surface. Recommended to use with solvent which is free of dirt, grease or mold release to impact of the products expected utility.
2. Mix thoroughly by weight 2 : 1. Mix approximately 15 seconds after uniform color is obtained.
3. For optimum properties mixed, this product should be used before its pot life. Do not mixing large two component at the same time to avoid that heat release to damage materials.
4. For maximum bonding strength apply adhesive evenly to both surfaces to be joined.
5. Contact pressure is recommended during this resin cure.

### Typical Cured Properties\*1

Glass Transition Temp., (MDSC), °C	70
CTE *2 (<Tg), µm/m/°C	102
CTE *2 (>Tg), µm/m/°C	223
Durometer Hardness, Shore D	85
Specific Gravity	1.10
Shear Strength*3, Al vs. Al, kgf	1,801
Shear Strength*4, Al vs. Al, kgf	1,830
Shear Strength*5, Al vs. Al, kgf	972
Degradation Temp., (TGA 10°C /min) °C	328
Peel Strength*6 Fe vs. Fe, kgf	118
Weight Loss Ratio @100°C, %	0
Weight Loss Ratio @150°C, %	0.13
Weight Loss Ratio @200°C, %	0.37
Weight Loss Ratio @250°C, %	0.55
Weight Loss Ratio @300°C, %	2.09
Weight Loss Ratio @350°C, %	16.41
Thermal Conductivity, W/mK	0.3
Thermal Resistance m²K/W	0.01
Volume Resistivity, ohm-cm	5*10 <sup>15</sup>
Surface Resistivity, ohm	5*10 <sup>14</sup>
Dielectric Constant, 100Hz	4.1

\*1 Specimen Cure Condition:80°C / 60min

\*2 CTE: Coefficient of Thermal Expansion

\*3 Specimen Cure Condition: 80°C / 60min, Specimen size: 25.4mm x 25.4mm

\*4 Specimen Cure Condition: 70°C / 60min, Specimen size: 25.4mm x 25.4mm

\*5 Specimen Cure Condition: 25°C / 240min, Specimen size: 25.4mm x 25.4mm

\*6 Specimen Cure Condition: 80°C / 60min, Specimen size: 67mm x 24mm

### 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 has amine 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.