



## High Performance Epoxy Adhesive

### Product Description

JA577 is a two component, medium viscosity, toughened epoxy. Cured resin forms a tough, off-white bondline which provides high peel and shear strength in the same time. The crack and fatigue resistance of this product are outstanding in many vibrational applications. This resin is suited for different substrates, including plastics, metals, glass 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 resin after environmental test experiments is excellent.
2. This product offers outstanding shear and peel strength.
3. Cured resin is effective against moisture and water.
4. This resin has good chemical and solvent resistance.
5. This product exhibits excellent thixotropy. This product can be controlled flow and have sag resistance.
6. This product complies to the 2011/65/EU RoHS regulations.

### Typical Uncured Properties

	JA577A	JA577B
Appearance	Liquid	Liquid
Color	Milky	Yellow
Viscosity 25°C, S14 50rpm, cps	13,000~19,000	13,000~22,000
Viscosity 25°C, S14 5rpm, cps	28,000~41,000	17,000~30,000
Thixotropic Index	1.5~3.1	≥ 1.2
Mixing Viscosity 25°C, cps	25,000	
Specific Gravity	1.16	1.01

### Typical Curing Properties

Mix Rate (A : B) By Volume	2 : 1
Mix Rate (A : B) By Weight	2 : 1~0.87
Pot Life, 25 °C, min	30
Surface Dry Time, 25 °C, hr	4
Through Cure Time, 25 °C, day	7

### 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 volume 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.
4. For maximum bonding strength apply adhesive evenly to both surfaces to be jointed.
5. Contact pressure is recommended during this product cure.

6. The handling information of this product supplied in dual syringe cartridge can be obtained by requesting a copy of "Introduction for Adhesive Cartridge Dispenser", F- 06122201.

### Typical Cured Properties\*1

Glass Transition Temp*1., (DSC), °C	48~52
Glass Transition Temp*8., (TMA), °C	69
Glass Transition Temp*8., (DSC), °C	63
CTE*1*9 (30~40 °C), μm/m/ °C	20
CTE*1*9 (60~100 °C), μm/m/ °C	261
CTE*8*9 (30~60 °C), μm/m/ °C	76
CTE*8*9 (60~120 °C), μm/m/ °C	239
Durometer Hardness, Shore D*1	82
Water Absorption Ratio*1(25 °C /24hr), %	0.07
Water Absorption Ratio*1(80 °C /24hr), %	1.71
Water Absorption Ratio*1(97 °C /1.5hr), %	0.49
Shear Strength*1 Al vs. Al, kgf/cm <sup>2</sup>	235
Shear Strength*2 Al vs. Al, kgf/cm <sup>2</sup>	307
Shear Strength*3 Al vs. Al, kgf/cm <sup>2</sup>	237
Shear Strength*4 Al vs. Al, kgf/cm <sup>2</sup>	280
Shear Strength*5 Al vs. Al, kgf/cm <sup>2</sup>	322
Shear Strength*6 Al vs. Al, kgf/cm <sup>2</sup>	225
Shear Strength*7 Al vs. Al, kgf/cm <sup>2</sup>	310
Shear Strength*8 Al vs. Al, kgf/cm <sup>2</sup>	324
Degradation Temp*1, (TGA 10 °C /min) °C	323
Weight Loss Ratio*1 @ 100°C, %	0
Weight Loss Ratio*1 @ 150°C, %	0.4
Weight Loss Ratio*1 @ 200°C, %	1.1
Weight Loss Ratio*1 @ 250°C, %	1.9
Weight Loss Ratio*1 @ 300°C, %	3.7
Weight Loss Ratio*1 @ 350°C, %	10.4
Thermal Conductivity, W/mK	0.3
Thermal Resistance m <sup>2</sup> K/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: 25 °C / 7 days

\*2 -20 °C×30min→80 °C×30min, thermal cycle×100cycles

\*3 25 °C / 96hr in water

\*4 80 °C / 85%RH/ 96hr

\*5 -20 °C×20min→80 °C×20min, thermal shock×100cycles

\*6 -20 °C / 500hr

\*7 80 °C / 500hr

\*8 Specimen Cure Condition: 80 °C / 1hr

\*9 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 amine content, replace the lid immediately after use. Keep without any possibility of wet when not using. Self life of this product is 1 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.

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.