



Von Roll USA, Inc.
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Product Data Sheet Conductive Room Temperature Curing Adhesive

E-SOLDER® 3021

Description

E-Solder 3021 is an epoxy silver composition recommended for applications requiring high electrical conductivity and good adhesive properties. E-Solder 3021 is supplied as a two-component system consisting of Part A and Part B. Mixing the two parts in equal proportions results in a fast setting, tough, thermoset, highly conductive plastic. Typical applications of E-Solder 3021 are lead terminations, bonding ferrites, circuits and conductive bonds on surfaces which will not tolerate the elevated temperatures required for fired-on coatings or solders.

Physical Properties

| | |
|---------------------------------|------------|
| Color | Silver |
| Specific Gravity | 2.1 |
| Viscosity @ 25°C | Paste |
| Mix Ratio | 1:1 |
| Work life mixed, 20 grams, 25°C | 30 minutes |
| Shelf life, 25°C | 4 months |
| 5°C | 12 months |

Technical Properties

| | |
|---------------------------------|-------|
| Volume Resistivity, ohm-cm | |
| 25°C | 0.030 |
| 65°C | 0.003 |
| Lap Shear Tensile Strength | |
| ASTM D-1002, 25°C, psi | 1,200 |
| Aluminum to Aluminum | |
| Butt Tensile Strength, Modified | |
| ASTM D-429, 25°C, psi | 2,000 |
| Brass to Brass | |
| Hardness, Shore D | 70 |
| Operating Temperature, °C | 150 C |

Method of Use:

Equal parts of Part A and Part B should be thoroughly mixed on a weight or volume ratio.

When packaged in squeeze tubes, equal lengths are squeezed on a smooth surface such as aluminum foil or glass and mixed thoroughly.

Cure Schedule

| <u>Temperature</u> | <u>Time</u> |
|--------------------|-------------|
| 25°C | 16 hours |
| 65°C | 4 hours |

Excess material should be cleaned off with acetone before material cures.

Storage and Shelf Life

E-Solder 3021 should be stored in a cool place. Elevated temperatures accelerate the aging of E-Solder 3021. This results in an increase in viscosity and grainy appearance with time. Although resistivity appears to be unaffected the handling and dispensing properties become more difficult. It is suggested that if the material is not to be used up within two months, the conductive cements be stored in a refrigerator at 5°C (40°F). The unopened containers should be removed from the refrigerator several hours before use and allowed to reach room temperature. Storage Life at 25°C is one year.

Acetone may be used for clean up before the cement cures. For thinning, a small amount of acetone (up to 5% by weight) may be used to reduce viscosity.

Containers

E-Solder 3021 is available in 2 oz. Squeeze Tube Kit and 8 oz. Containers.

Precautions

May cause skin sensitization. Do not get on skin, in eyes, or on clothing. Avoid inhalation. Use good ventilation. In case of skin contact, wash with soap and water. If eye contact occurs, flush with water and get prompt medical attention. For Material Safety Data Sheet contact Von Roll at 518-344-7100.

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