

Product Data Sheet

Conductive Room temp. Curing Adhesives E-Solder[®] 3021 E-Solder[®] 3025

Description

E-Solder 3021 and 3025 are epoxy silver compositions recommended for applications requiring high electrical conductivity and good adhesive properties. E-Solder 3021 and 3025 are both 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 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	3021	3025
Color	Silver	Silver
Specific Gravity	2.1	2.12
Viscosity, 25°C	Paste	Paste
Work life mixed, 20 grams, 25°C	30 minutes	4-6 hours
Shelf Life, 25°C	4 months	4 months
Shelf Life, 5°C	12 months	12 months
Technical Properties	3021	3025
Volume Resistivity, ohm-cm		
25°C cure	0.030	0.040
65°C cure	0.003	0.004
Lap Shear Tensile Strength		
ASTM D-1002, 25°C, psi		
Aluminum to Aluminum	1,200	2,000
Butt Tensile Strength, Modified		
ASTM D-429, 25°C, psi		
Brass to Brass	2,000	2,500
Hardness, Shore D	70	
Operating Temperature	150°C	150°C
Thermal Conductivity	1.04W/m.k (35x10 ⁻⁶ in/in/°C)	36x10 ⁻⁶ in/in/°C
Cure Schedule	3021	3025
25°C	16 h	24-36 h
65°C	4 h	4 h
100°C		15 min

Method of Use

Equal parts of Part A and Part B should be thoroughly mixed on a weight or volume ratio. When packaged in injections, equal lengths are squeezed on a smooth surface such as aluminium foil or glass and mixed thoroughly.

E-Solders 3021/3025 should be stored in a cool place. Elevated temperatures accelerate the aging. 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. The unopened containers should be removed from the refrigerator several hours before use and allowed to reach room temperature. Per US-Manufacturer the Storage Life is at 5°C, 12 months or at 25°C, 4 months. Our injections fillings have a longer shelf life, the quality stays longer intact. Due to the compactized fillings the oxidation of the silver-powder is slowed down, the degazing is reduced.

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

1 set x 30g filled in injections (Part A 15g – Part B 15g)

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. SPI Classifications 3.

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