CHEMENCE

TECHNICAL DATA

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RITE-LOK SL 65

PRODUCT DESCRIPTION

RiteLok SL65 is a two part, silver-filled epoxy designed to produce highly electrically conductive bonds.

TYPICAL APPLICATIONS

RiteLok SL65 conductive epoxy gives good adhesion to a variety of substrates, especially metals, which is characteristic of an epoxy. SL65 can be used for connecting heat sensitive components to PCB's, connecting wires to components, general solder replacement, repair work on PCB's and elsewhere, creating conductive paths to aid assembly design, conductive connections between plated parts and in some shielding applications.

PROPERTIES OF MATERIAL

		Value
Chemical type		Silver filled epoxy resin
Appearance		Smooth silver paste
Specific Gravity		~3
Tensile Shear Strength[1], (24 hours)	Range, N/mm^2	7-14
Fixture Time[2]	(hours)	4
Full Cure @22°C	(hours)	24
Pot-life mixed @22°C	(mins)	60
Volume Resistivity, micro-Ohm.cm		1,000-4,000 [3] 500-1,000 [4]
Flash Point	(°C)	> 100
Shelf Life @ 20°C	(months)	6
Max Gap Fill	(mm)	4
Operating Temp Range	(°C)	-50 to +120
Intermittent Temp Range	(°C)	-50 to +140

[1] ASTM D1002, on grit blasted mild steel, at 22°C
[2] To obtain ~15% strength, at 22°C
[3] Cured for 16 hours at 22°C, tested at 22°C
[4] Cured for 1 hour at 82°C, tested at 22°C

Bond Strength vs. bond gap

Maximum recommended gap for RiteLok SL65 is 4mm. The bond strength will decrease significantly when the bond gap is >0.5mm.

Cure Speed and Performance vs. Temperature

Cure speeds are as detailed in the table opposite. Two alternative suggested cure schedules are for 2 hours at 60°C or for 30mins. at 100°C.

As indicated in the table, the conductivity of SL65 increases with the curing temperature used, up to a maximum recommended cure temperature of 100°C.

As an alternative, a short post-cure schedule of 15mins. at 82°C will improve the conductivity of material already cured at room temperature.

DIRECTIONS FOR USE

For best results, ensure parts are clean, dry and free from oil and grease

Mix equal quantities of RiteLok SL65 parts A & B on a clean surface or in a container using a spatula. Make sure that the two parts are thoroughly mixed, e.g. for 2 to 3 minutes. The mixed product can be loaded into a disposable syringe for more accurate dispensing if desired.

Apply the mixed paste to one substrate to be bonded. If there is a second part, press the second substrate on to the adhesive and clamp the two parts for best bond strength results.

Note – SL65 can be thinned by adding up to 5% by weight of toluene or xylene to the mixed paste and then mixing thoroughly. The mixed product must then be applied immediately, before the silver content starts to settle out of the mixture. However, this added solvent content must either be allowed to evaporate before the SL65 is cured at elevated temperatures, or care must be taken to ensure that only fairly small quantities of adhesive are cured, due to the possible danger of the solvent igniting.

TYPICAL ENVIRONMENTAL RESISTANCE

Hot strength

RiteLok SL65 is suitable for use at temperatures up to 120°C. At 120°C the bond strength will be approximately 10% of the strength at 21°C.

Heat ageing

RiteLok SL65 retains over 90% full strength when heated to 100°C for 90 days then cooled and tested at 21°C.

TECHNICAL DATA

TYPICAL ENVIRONMENTAL RESISTANCE

Chemical / Solvent Resistance

RiteLok SL65 adhesive exhibits excellent chemical resistance to most oils and solvents including most hydrocarbons, alcohols, water, mild alkalis and salts. RiteLok SL65 adhesive is not recommended for use in pure oxygen or chlorine lines.

GENERAL INFORMATION

For safe handling of this product consult the Material Safety Data Sheet.

Uncured SL65 may be cleaned up using MEK or acetone.

STORAGE

Store in a cool area out of direct sunlight.
Exposure to temperatures above 25°C will decrease the shelf life of the product.
Refrigeration to 5°C will optimise the shelf life of the product.

PRESENTATION

2 x 15g pots
2 x 50g pots.

DATA RANGES

The data contained in this data sheet may be reported as typical value and/or range. Values are based on actual test data and are verified on a regular basis.

NOTES

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