

Silicon Conformal Coating

SIL500 is a 1-part silicon conformal coating with good adhesion on many substrates. It is a transparent elastomer and can be applied in high thickness deposit (100µm to few mm). Fast curing at room temperature and without VOC. It can be applied by brushing or spraying.

SIL500 gives protection for your PCBs, especially against humidity and environmental contaminants.

CHARACTERISTICS

- Monocomponent conformal coating,
- Fast curing at room temperature,
- Protection against humid and thermal environments,
- Excellent adhesion on many substrates (PCB, plastics,...),
- Fluorescent,
- No solvent,
- Cured until 5mm-thickness,
- Application by dispensing machine, spraying, brushing.

APPLICATION OF VARNISH

SIL500 can be sprayed or brushed. The thickness of the coating depends on the method of application.

SIL500 contains a UV trace which allows inspection of the PCB after coating to ensure complete and even coverage. The stronger the reflected light, the thicker the coating layer is.

Dispensing machine and spraying

SIL500 needs to be thinned with DVS before spraying. The optimum viscosity to give coating quality and thickness depends on the spray equipment and conditions but a starting point could be 0.7 parts coating to 0.3 part thinners. If bulk coating material has been agitated, allow to stand until air bubbles have dispersed. An higher dilution of SIL500 is not recommended because it can create some issues of curing and a tacky coating.

SIL500 can be also applied with a jetter

SIL500 is suitable both for use in manual spray guns and computer controlled airless spray equipment that only coats the required areas of the PCB, eliminating the need for masking. The nozzle of the spray gun requires to be selected to give an even spray to suit the prevailing viscosity of the coating material.

To ensure penetration of the coating beneath the components and in confined spaces, spray the assembly from all directions to give an even coating.

Brushing

Ensure that the coating material has been agitated thoroughly and has been allowed to settle for at least 2 hours. The coating should be kept at ambient temperature. Gently apply the coating with a good quality brush (silk) so as not to leave brush marks and so that the components and wiring are not disturbed.

CLEANING OF PCB

SIL500 can be applied on uncleaned PCBs. However, cleaning will increase adhesion on the substrat. ABchimie recommend to apply SIL500 on dried and cleaned PCB. The CI, being composite materials, absorb moisture. It is important to remove it before coating. A passage in oven for 1 to 2 hours at 60°C is generally sufficient.

ABchimie manufactures a range of 100% Ozone Friendly cleaning products in both the hydrocarbon solvent and aqueous fields. All products produce results within the Military specification (<1.56mg NaCL/cm2). Please contact ABchimie for further information.

DRYING TIMES AND CURING CONDITIONS

SIL500 will be touch dry after 12 minutes at room temperature (50% RH) and does not require a thermal cure. The full properties of SIL500 will be obtained after 24 hours at room temperature.

Tack free time	12min
Cure to 500µm	90min

LIQUID SIL500 PROPERTIES:

Color	Clear
Composition	Silicone
Viscosity (@ 25 °C)	500 cSt
Solid content	100%

CURED SIL500 PROPERTIES (after 7 days at 23°C) :

Colour	Semitransparent (light yellow effect) Fluorescent below 365nm
Hardness Shore	32A
CTE	930 ppm/°C
Temperature	From - 50°C à + 200 °C
Thickness recommended	350µm minimum

SIL500 is compliance with REACH and RoHS regulations. If you want a certificate, please contact us (info@abchimie.com).

PACKAGING:

Conformal coating SIL500

Bulk 1kg	SIL500 1K
Bulk 5kg	SIL500 5K
Bulk 20kg	SIL500 20K

Thinner

Bulk 5 litres	DVS 05 L
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STORAGE AND SHELF LIFE :

SIL500 must be stored in a closed and sealed container after opening. In any case, please refer to MSDS for good storage conditions.

Storage temperature: 5 to 30°C

A temporary lower or higher temperature during few days (transport) doesn't distort varnish properties.

Date by use: 12 months after the date of manufacturing

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