

Silicon Conformal Coating

SIL250 is a 1-part silicon conformal coating with good adhesion on many substrates. This transparent elastomer has a low viscosity 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.

SIL250 gives protection for your PCBs, especially against humidity and environmental contaminants.

CHARACTERISTICS

- Monocomponent conformal coating,
- Fast curing at room temperature,
- Low viscosity,
- Protection against humid and thermal environments,
- Excellent adhesion on many substrates (PCB, plastics,...),
- Fluorescent,
- Cured until 5mm-thickness,
- Application by dispensing machine, spraying, brushing, dipping

APPLICATION OF VARNISH

SIL250 can be sprayed or brushed. The thickness of the coating depends on the method of application.

SIL250 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

SIL250 can be applied with a jetter.

SIL250 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.

Dipping

Ensure that the coating material in the container has been agitated thoroughly and has been allowed to stand for at least 2 hours for all the air bubbles to disperse.

The board assemblies should be immersed in the SIL250 dipping tank in the vertical position, or at an angle as close to the vertical as possible. Connectors should not be immersed in the liquid unless they are very carefully masked. ABchimie Peelable Coating Mask (LDM) is ideal for this application.

Leave submerged for about 1 minute until the air bubbles have dispersed. The board or boards should then be withdrawn **VERY SLOWLY** (5 to 20 cm/mn) so that an even film covers the surface. After withdrawing, the boards should be left to drain over the tank until the majority of residual coating has left the surface.

After the draining operation is complete, the boards should be placed in an air-circulating drying cabinet and left to dry.

CLEANING OF PCB

SIL250 can be applied on uncleaned PCBs. However, cleaning will increase adhesion on the substrat. ABchimie recommend to apply SIL250 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

SIL250 will be touch dry after 15 minutes at room temperature (50% RH) and does not require a thermal cure. The full properties of SIL250 will be obtained after 24 hours at room temperature.

Tack free time	15min
Cure to 500µm	90min

LIQUID SIL250 PROPERTIES:

Color	Yellow
Composition	Silicone
Viscosity (@ 25 °C)	250 cSt

CURED SIL250 PROPERTIES (after 7 days at 23°C) :

Colour	Yellow Fluorescent below 365nm
Hardness Shore	36A
CTE (volumetric)	930 ppm/°C
Temperature	From - 50°C à + 200 °C
Thickness recommended	150µm

SIL250 is compliance with REACH and RoHS regulations. If you want a certificate, please contact us (info@abchimie.com).

PACKAGING:

Conformal coating SIL250

Bulk 1kg	SIL250 1K
Bulk 5kg	SIL250 5K
Bulk 20kg	SIL250 20K

STORAGE AND SHELF LIFE :

SIL250 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

All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification. ABchimie cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.

Toutes ces informations sont données en toute bonne foi mais sans garantie. Chaque application étant différente, il est vivement conseillé d'effectuer des tests préalables. Les spécifications concernant les propriétés sont données à titre indicatif et non comme étant spécifiques.