



ABchimie creates, manufactures and distributes for more than ten years, professional solutions for protection and cleaning electronic circuits. With an important range of products consisting of resins, conformal coatings, silicones, maintenance and cleaning solutions, ABchimie is able to answer any specific need.

With an international presence, the company figures among its loyal customers many multinationals companies such as Schneider, Alstom , Zodiac , Sagem Defense , Renault, Volvo , BMW ...

UV curing

UV is used for conformal coatings.

UV conformal coating contains one or several photoinitiators which permit to start the curing system. The benefits are:

- Ultra quick processing
- No VOC
- Usable on existing equipment
- High accurate deposit
- High viscosity available for high thickness deposit
- LED curing version available
- Energy saving, electrical consumption.
- -55°C +150°C
- UL94V0
- CEI EN NF 61086
- Usable on SC100,200,300,400, DV, DJ..

UV and LED

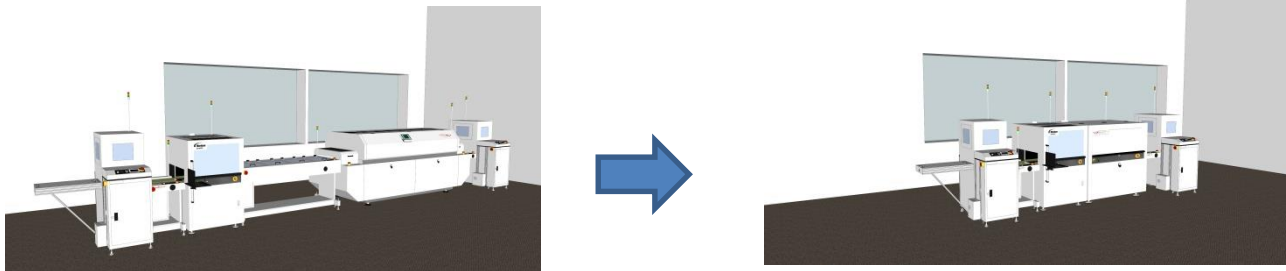
Ecological and economical solutions.

Sustainable development.

Protect people and environment through safe products.

LED advantages (compared to mercury lamp Hg)

- No ozone emission ->No extraction
- Low temperature on substrate
- Low energy consumption
- Instant ignition and extinction
- High lamp life
- Space floor



Coating thickness

- Conformal coating: 25 to 100 microns
- Micro potting: 125 à 250 microns
- Potting: up 250 microns

QUALIFICATION TESTS

- Moisture environment
- Salt test
- SIR test
- VRT test
- Cross cut (ISO 2409)
- Solvent and chemical resistance
- Reparability
- BONO test
- Dielectric test, resistivity
- Dielectric strength
- Dust test
- Gas test
- Standard for Polymeric Materials - UL746E and UL94V1 for ABCHIMIE746E UV
- Flammability Standard - UL94V0 for ABchimie42K UV



CONFORMAL COATING

ABchimie's conformal coating are specially developed to ensure high protection to PCBAs from their environment.

They improve and extend the working life and reliability of performance. They protect PCBs against harsh environment as salt spray, humidity, temperature, solvent and dust in general, a thin layer (25 to 50 microns). These environmental conditions can cause damage as corrosion, current leakage and failure.

Conformal coating is the best way to increase reliability and shelf life of an equipment submitted to a harsh environment.

- **100% reactivity**
- **No solvent**

CONFORMAL COATING

The complete range proposes different base of raw materials:

- **Acrylic**
- **Silicone**
- **Urethane**
- **Aqueous urethane**
- **UV curing material (Acrylate urethane)**
- **None VOC silicone product**
- **100% content**



APPLICATION METHODS:

- 1. SPRAYING** – Usual method. Very good results on plane surface.
- 2. CANS** – recommended for repairs, small and medium series.
- 3. SPRAY GUN** – highly economic, hand spray using a spray or aerosol can. All coatings can be applied in this way.
- 3. SELECTIVE DEPOSIT** – Different existing machineries: ASYMTEK, PVA, USI, DIMA . High performance level for mass production, reliability of deposit. All coating types can be used if the correct dispense head is selected.
- 4. DIPPING** – To ensure presence of conformal coating even under components. it is limited to materials that do not cure quickly by moisture, light or oxidation.

AVR80

AVR80 Conformal Coating is a flexible transparent acrylic coating for the protection of electronic circuitry formulated to meet the highest resistance requirements.



AVR80

Tropicalisation varnish AVR80 is a repairable acrylic varnish, transparent and flexible. It is designed to PCB, which are subjected to harsh environments.

AVR80 is designed to be removed with ABchimie SND (100% Ozone Friendly).

AVR 80 can be sprayed, dipped or brushed. The thickness of the coating normally deposits a film thickness of about 25 microns.

AVR 80 contains a UV trace which allows inspection of the PCB after coating to ensure complete and even coverage.

AVR80

Features:

- Excellent adhesion under all climatic conditions.
- Fluoresces under UV light as an aid to inspection.
- Wide temperature range -65°C to +150°C.
- Can be soldered through without fear of highly toxic gases being produced (contains no isocyanates).
- Resistant to mould growth.
- Can be totally removed with ABchimie SND.
- Compatible with other high specification acrylic coatings.
- Excellent Dielectric properties.
- UL QMJU2 approval. (File E308681)
- NF EN 61086-2 Approval
- Non toxic version available (AVR80 BA)

AVR80 BA

AVR80 BA Conformal Coating is a non toxic, flexible transparent acrylic coating for the protection of electronic circuitry formulated to meet the highest resistance requirements. AVR80 BA is designed to be removed with ABchimie SND .



AVR80 BA

- No toxic, no toluene
- No toxic gases during repair
- Oven curing not required
- Quick Evaporation rate
- Excellent adhesion and dielectric properties
- Coating thickness 25 to 50 microns
- IPC-CC-830B, UL94V0, NF EN 61086

ABchimie 746-E UV

ABchimie746 E UV is a **soft**, permanent and transparent new tropicalisation varnish.

It cures under UV light and it is designed to protect pcbs from harsh environments.

ABchimie746 E UV benefits from dual-cure technology (UV/humidity) which allows reticulation in shaded areas.



ABchimie 746-E UV

Features:

- Excellent adhesion in harsh weather conditions
- Fluorescent UV to control of the layer of conformal coating deposit
- Operating temperature range -55°C to + 150°C
- Can be soldered through without fear of highly toxic gases being produced
- Resistant to mould growth
- Excellent dielectric properties
- Very fast curing under UV exposure
- Moisture cure for shadowed areas
- No VOC
- Space ground reduced compared with solvent bases
- High speed process, increase of the productivity
- Low viscosity for select coat machine (used on head SC200, SC280, SC300 and SC400)

ABchimie 746-E UV LED

The new LED curing technology is a revolution. Indeed, unlike conventional UV lamp, LED technology doesn't generate toxicity during exposure , there is no need for special aspiration for evacuation of ozone produced by UV and, there is no risk for the operator.

ABchimie is the only manufacturer offering a conformal coating developed especially for this type of lamp which provides process speeds comparable to UV lamps without the disadvantages.

ABchimie746-E UV LED (without Tack)

Conformal coating more visquous (due to additive to avoid tack effect), then higher pressure and some microplash acceptable, No tack effect.

Color of varnish « yellow tranlucide, become clearer after curing.

Abchimie 42K-UV

ABchimie42K-UV is a soft one component resin, UV curable which have a good adhesion on many substrates.

It can be applied in high thickness deposit (few mm).

Its curing is immediate with UV radiation.

ABchimie42K-UV gives local protection for your components, especially against humidity and high electric pressure. It also can be applied to bring robustness to your systems.



Adapted version for curing with UV LED technology is available (**ABchimie42K-UV LED**)

Abchimie 42K-UV

Features:

- Soft resin
- Protection against humid and thermal environments
- Excellent adhesion on many substrates (PCB, plastics,...)
- No VOC
- Very fast curing under UV exposure
- Space ground reduced compared with solvent bases
- High speed process, increase of the productivity
- Silicone free

CLEANING PRODUCTS OF PCBA

ABchimie developed a range of cleaning solvents and detergents that meet international military cleanliness standards (1.54mg NaCl / cm²) and are compatible with the majority of plastics on your electronic boards.

The elimination of contaminations will ensure the durability of your sub-assemblies and will guarantee in the case of varnishing operation, the good adhesion of your varnishes.

The cleaning of electronic boards after welding is imperative when it is desired to ensure the longevity and reliable reliability of the electronic subassemblies.

SND

SND is a fast-drying cleaning solvent specially formulated for defluxing and degreasing electronical and electrical equipment.

SND is really efficient to take off coating on PCB's and it dissolves very quickly acrylic varnish.

It has a very large range of application and this product is compatible with a large range of plastics materials.



SND

Features:

- Non-CFC, and non-halogenated cleaning solvent.
- Excellent removal of greases, oils, flux residues and acrylic conformal coatings from PCBs
- SND is a dry solvent, no greasy residues after evaporating.
- Harmless to most plastics, rubbers, elastomers, and surface coatings.
- Available in cans and bulks.

DNS

DNS Is the new flux remover which will replace SND.

DNS is a rapid drying cleaning and defluxing solvent. It is designed for efficient cleaning, degreasing and defluxing of electrical and electronic equipment.

It has the advantage of being harmless to the ozone layer.

Its performance, wide spectrum of use and rapid evaporation make it an exceptionally effective product.

DNS

Features:

- The DNS does not attack the ozone layer, it does not contain CFCs, HCFCs or T111
- DNS is a dry solvent, leaving no residue
- DNS is effective on greases, oils, flux residues and acrylic varnish or uncured silicone printed circuit boards

SND vs DNS

	SND	vs	DNS
Flash point °C	0		13
Evaporation rate	16		20
VME	340		370
<u>Smelling</u>	8/10		7/10
<u>Efficiency</u>	++		+++
<u>Toxicology</u>	-		+