

# TECHNICAL DATA SHEET



ABchimie 6500UV

DATE July13

UV cure conformal coating high viscosity

## **PRODUCT DESCRIPTION**

ABchimie 6500UV conformal coating is a transparent one-component coating to protect electronic assemblies, formulated to meet the highest resistance requirements. It permits to add thickness on component if necessary until 8 mils (2 mm)

## **FEATURES**

- Excellent adhesion under all climatic conditions
- Fluorescent under UV light as an aid to inspection
- Wide 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
- No VOC
- Space ground reduced compared with solvent borne
- High speed process, increase of the productivity
- High viscosity for select coat machine (used with head SC400 asymtek machinery)
- **No Silicone**

## **APPLICATION**

ABchimie 6500UV can be applied on syringes or with select coat machine.

Workshop temperatures of less than 16°C and relative moisture of 50% minimum are suitable for the application of ABchimie 6500UV conformal coating.

All PCBs, being composite materials, absorb moisture. If this is not removed, the conformal coating may not protect to its fullest extent. Pre-drying of 4 hours at 80°C, or better still, vacuum desiccation, will remove most of the moisture.

ABchimie 6500UV conformal coating contains an UV tracer 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.

## CLEANING BOARDS

Boards should be thoroughly cleaned before coating. This is required to ensure that satisfactory adhesion to the substrate is possible. Also all flux residues must be removed as they become corrosive if left on the PCB.

We recommend using cleaning solvent SND, or CIPEX 40 or 42 (waterbase).

## CLEANING

To clean equipments or clean the ABchimie6500UV conformal coating not cured, we recommend to use SND cleaning solvent.

## DRYING TIMES AND CURING CONDITIONS

ABchimie 6500UV conformal coating cures with UV technology.

### UV Curing:

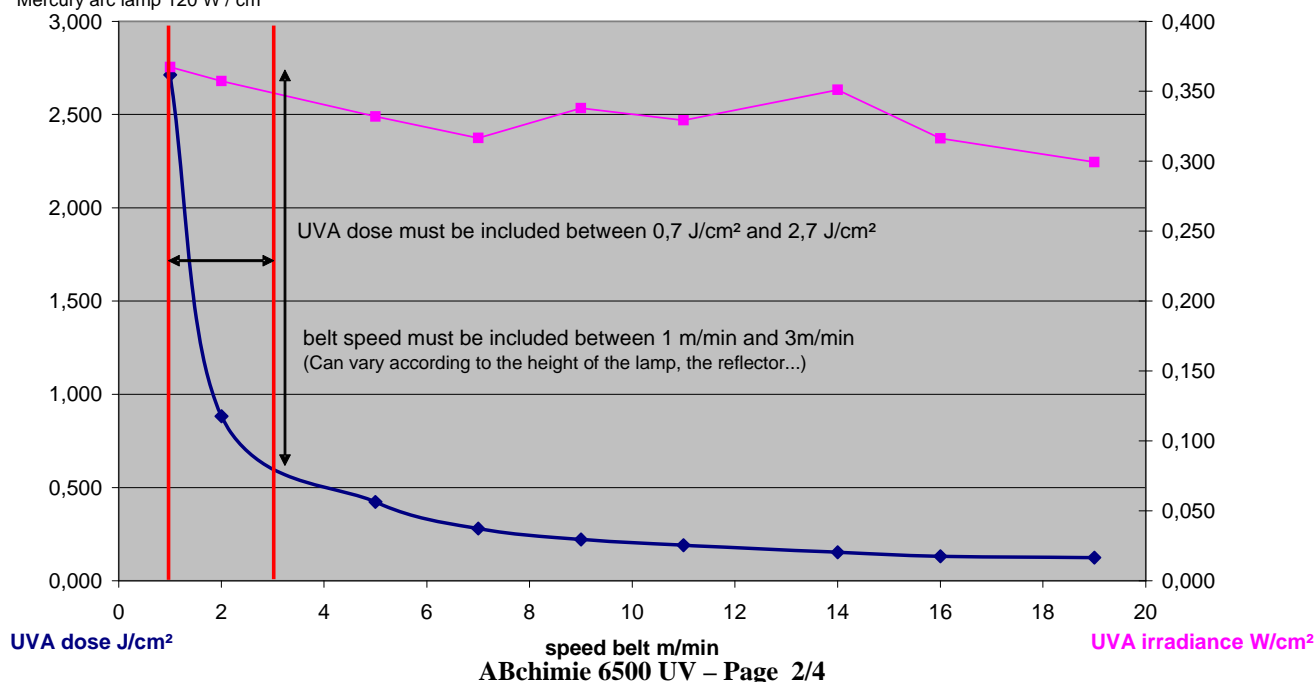
It is important to use the appropriate UV equipment, as well as the parameters recommended to obtain the optimal properties of the ABCHIMIE 6500UV conformal coating.

The following graph gives optimal conditions to cure ABchimie 6500UV conformal coating and obtain the best performances:

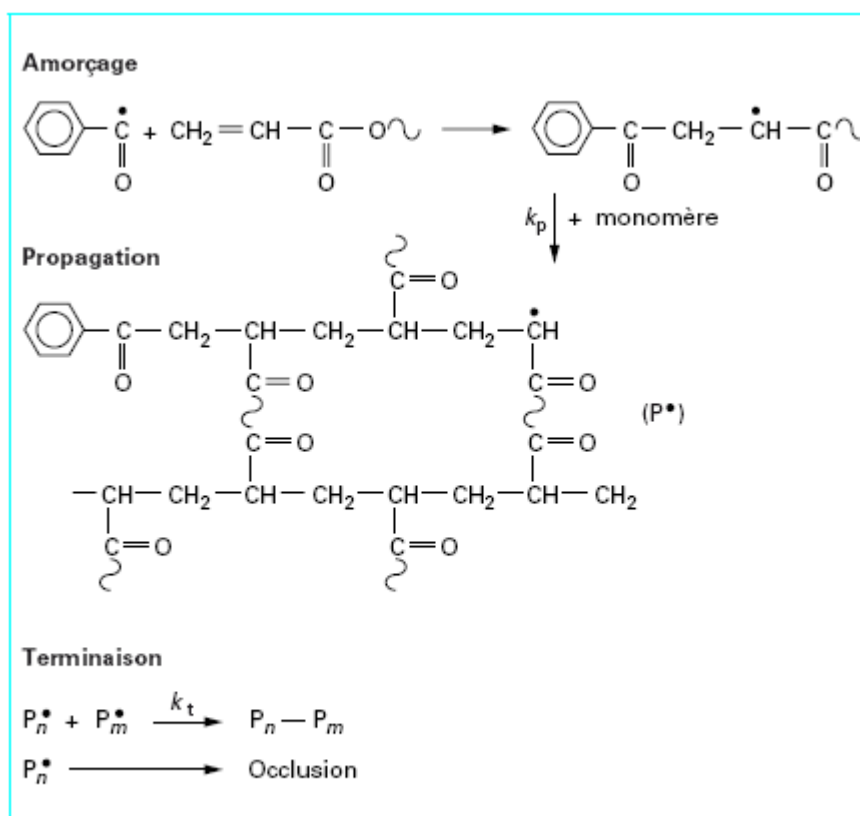
**Mercury arc lamp 120 W/cm**  
**1 x 1m/min < cycle < 1 x 3m/min**  
**0,7 J/cm<sup>2</sup> < UVA dose < 2,7 J/cm<sup>2</sup>**

**UVA Dose and UVA irradiance vs speed belt**  
**=> determination of optimal cured conditions**

Characteristics of the UV equipment:  
Mercury arc lamp 120 W / cm



## Curing mechanism :



**Figure 5 – Schéma réactionnel de la polymérisation radicalaire photoamorcée d'un monomère diacrylate**

## TYPICAL PROPERTIES

### Liquid ABchimie 6500UV

Nature	Acrylate
colour	slightly yellow liquid
non-volatile content	100%
Viscosity at 25°C	6000 - 7000 cps
Flash point	> 100°C
Recommended thickness	Until 2 mm
Pot life	6 months

### Cured ABchimie 6500UV

Colour	transparent
Adhésion ISO 2409	Class 0 (excellent)
Electrical resistivity	$1 \times 10^{14}$ Ohms/cm
Insulation resistance ( $\Omega$ )	$10^{12}$ (NF EN 61086)
VRT	- 55°C + 125°C, 10°C/mn, landing 25 mn, 20 cycles
Thermal shock	- 25°C + 85°C, 25mn/25mn, 20 cycles
Breakdown voltage	> 1750V DC (NF EN 61086)

Temperature range	– 55°C to + 150°C
Salt fog	35°C, 5% salt, 2ml/h (NF EN 61086)

## **PACKAGING**

### **ABchimie 6500UV conformal coating**

30 ml seringe  
1 litre Bulk  
5 litres Bulk

## **REFERENCES**

ABCHIMIE 6500UV 30ML  
ABCHIMIE 6500UV 01L  
ABCHIMIE 6500UV 05 L

### **Cleaner**

5 litres Bulk

SND 05 L

## **STORAGE**

ABchimie 6500UV conformal coating must be stored in opaque and hermetic container, away from excessive heat, and at temperature below 40°C.

ABchimie 6500UV conformal coating cures under UV, so it is important not to expose it to light sources.

In every case, refer to the safety data sheet to make sure of good storage conditions.

*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.*