

# CONFORMAL COATINGS



## What is a conformal coating?

A **conformal coating** is a material intended to protect electronic boards from aggressive environments, mainly against humidity.

There are two main types of conformal coating:

- **Solvent-based coating** based on acrylic, rubber, silicone or polyurethane. These coatings have the advantage of being easy to use and can dry under ambient environment.
- **Solvent free** - 100% dry content (VOC Free), polymerize thanks to the UV lamps. These coatings have the advantage of curing in extremely short times and allow almost immediate drying. Solvent free, they will have a lower environmental impact.

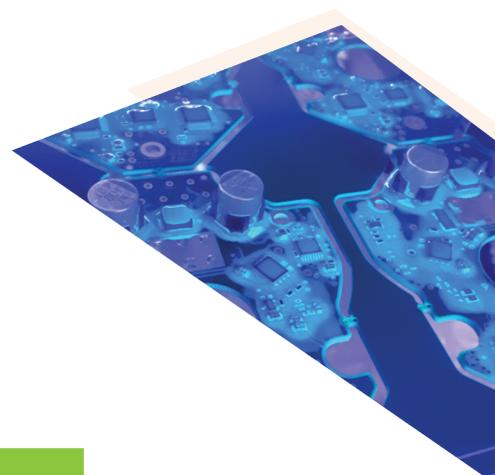
Depending on your needs, ABchimie will direct you to the most suitable solution for your application.

## Application example:

Conformal coating used by an Automotive customer to protect the audio system of Volkswagen cars: **ABchimie 526UV**

**Strong point:** Coating curing with **UV LEDs** (low temperature compared to UV mercury), avoids the masking of high components sensitive to heat.

**Industrial use:** 10 years.



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	High viscosity					
Solvent base	AVR80 BA	UVP33/ UVP63	NVR95	SVR99	SVP52	AVR80 BA GEL
Type	Acrylic	Urethane	Rubber	Silicone	Silicone	Acrylic
Type of coating	Solvent	Solvent	Solvent	Solvent	Solvent	Solvent
Repairability	Yes	Yes (Local)	Yes	Yes	Yes (Local)	Yes
Viscosity (cP) at 25°C	250	230/100	210	155	65	Gel
Dry residue %	30	44/ 34	22	30	45	40
Temperature range	-65°C +150°C	-65°C +125°C	-65°C +150°C	-50°C +125°C	-60°C +200°C	-65°C +150°C
Curing type	RT / IR	RT / IR	RT / IR	RT / IR	RT / IR	RT / IR
Tack free time (min) RT	20	20/40	10	20	30	30
Dielectric strength (kV/mm)	50	60	80	90	90	50
Stripper	SND/ ABclean	DVP	SND/ ABclean	SND/ABclean	DVP	SND/ABclean
Thinner	DVA BA	DVU	DVN	DVS	DVS	n.a
Standards	UL 94V0 /NF EN 61086 /NF EN 55545	Meets UL / -	UL	UL 94V0	-	-
Packaging	Flacon 10mL, Stylo 10mL, Aerosol 400mL, 5L	5L	5L	Aerosol 400mL, 5L	Aerosol 400mL, 5L	Syringe 30mL, 1L

► ABchimie offers its ready-to-use coating with a viscosity adapted to in-line or gun application systems in order to facilitate their implementation in the process for operators.

	High viscosity						
No or Low COV	UVA59	526 UV	746E UV	836 UV	800 UV	42K UV	80K UV
Type	Urethane	Urethane Acrylic	Urethane Acrylic	Urethane Acrylic	Urethane Acrylic	Acrylic	Acrylic
COV %	13%	Low COV	Low COV	Low COV	Low COV	0 COV	0 COV
Type of coating	Water based	Dual cure	Dual cure	Dual cure	Dual cure	Single cure	Single cure
Reparability	Yes (local)	Yes (local)	Yes (local)	Yes (local)	Yes (local)	Yes (local)	Yes (local)
Viscosity (cP) at 25°C	1200	55-140	70	70	500-1000	32 000	80 000
Dry residues %	40	(> 97%)	(> 98%)	(> 98%)	(> 94%)	100	100
Temperature range	-60°C +130°C	-50°C +150°C	-65°C +150°C	-50°C +150°C	-50°C +150°C	-50°C +150°C	-50°C +150°C
Curing type	RT / IR	UV Hg / UV LED	UV Hg / UV LED	UV Hg / UV LED	UV Hg / UV LED	UV Hg / UV LED	UV Hg / UV LED
Curing time/ energy	60 minutes	3000mJ/cm2	3000mJ/cm2	3000mJ/cm2	3000mJ/cm2	2500mJ/cm2	2500mJ/cm2
Dielectric strength (kV/mm)	60	60	60	60	60	60	60
Stripper	DVP	DVP	DVP	DVP	DVP	DVP	DVP
Cleaning	DEI water	SND/ ABclean	SND/ ABclean	SND/ ABclean	SND/ ABclean	SND/ ABclean	SND/ ABclean
Standards	-	UL 94V0 / NF EN 61086	UL 94V0 / UL 746E	UL 94V0 / UL 746E	UL 94V0 / UL 746E pending	UL 94V0	UL94V0
Packaging	5L	1L,5L	1kg, 5kg	1kg, 5kg	1kg, 5kg	Syringe 30mL, 1kg, 5kg, 20kg	Syringe 30mL, 1kg, 5kg, 20kg



Discover the conformal coating  
Video AVR80 BA acrylic repairable

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"Photos: ABchimie & iStock (illustrative purposes only)" - 09/2025