



**Vitralit®**  
UV and light-curing adhesives

**The Vitralit® system**

- UV acrylates
- Light-curing acrylates
- UV epoxides
- Light-curing epoxides
- UV polyester

**System properties**

- Single-component systems
- Short production times
- Solvent-free
- Low energy costs
- Excellent electrical properties
- Outstanding temperature and chemicals resistance

## The Vitralit® system – a comprehensive product range for numerous applications...

Our comprehensive range of Vitralit® systems covers a multitude of applications and offers many advantages: Vitralit® systems are used in many fields in both trade and industry. Vitralit® adhesives and sealants are single-component systems that cure within the space of only a few seconds.

### The main advantages of the Vitralit® systems are:

- Simple dosing, immersion, spray, roller application, etc;  
No mixing of several components and no pot life
- Depending on the application, curing times of 0,5 to 60 seconds can be achieved through exposure to high-energy UV light. This facilitates shorter cycle times also in mass production
- Solvent-free, therefore environmentally safe

- Low energy costs due to short curing times
- Excellent electrical properties
- Outstanding temperature and chemicals resistance
- Low heating

The short UV exposure time allows bonding of temperature-sensitive materials. With their low space requirement, the Vitralit® systems are ideal even for complex fully-automated high-volume production lines and can be well integrated in existing plants.

Contact us for advice about the ideal Vitralit® product for your particular application, complete with all technical specifications.

Electrical engineering/electronics							
Vitralit®	2009F	4451	1691	1657	6104 VT	6129	6138
Typical applications	Conformal Coating	Conformal Coating, Foil bonding	Glob-top	Glob-top sealant for large/high parts	Corner bonding, Mounting large parts on PCB	Die-Attach, Heat sink bonding	Die-Attach, Heat sink bonding
Viscosity (mPas)	70 - 150	600 - 800	280000 - 310000	120000 - 130000	80000 - 90000	30000 - 40000	150000 - 170000
Temperat. resist. (°C)	-40 to +180	-40 to +130	-40 to +180	-50 to +150	-40 to +200	-40 to +180	-40 to +180
Curing	UV	UV	UV / thermal	UV	UV / thermal	UV / thermal or with activator	UV / thermal
Colour	Transparent	Transparent	Black	Light grey	Translucent	White	White
Characteristics	Flexible, autoclavable, Excellent chemicals resistance	Quick curing, Low shrinkage, very elastic	High ion pureness, Excellent temperature resistance	Low ion content, Quartz-filled, Thixotropic, Flexible	High temperature resist., Good adhesion on metals and sintered materials	High chemicals resist., Good adhesion to glass, aluminium, ceramics	High chemicals resistance, Good heat conductivity, Spacer 40µ

Potting							
Vitralit®	2665	4641	1722	6104	6128	4755	4282 mod2
Typical applications	Flip-chip underfiller	Potting	Sealing of plugs, Switches and relays, Parts on FR4	Sealing rotors and sensors	Adhesive/ sealant for switches, plugs, relays	Selective coverage for metallisation processes	Ferrite bonding, screw and thread-locking adhesive
Viscosity (mPas)	3000 - 5000	2000 - 3000	5000 - 8000	3500 - 6000	800 - 1200	7000 - 14000	500 - 600
Temperat. resist. (°C)	-55 to +175	-50 to +150	-40 to +120	-40 to +200	-40 to +150	-30 to +120	-40 to +170
Curing	UV / thermal	UV / VL	UV	UV / thermal	UV / thermal & activator	UV	UV / Activator
Colour	Transparent	Light yellow, Clear	Pink transparent	Translucent	Translucent	Transparent	Light green
Characteristics	Cationic, Extremely reliable in aerospace applications, Low CTE	Flexible, Dry surface, Good resetting capacity	Good adhesion to thermoplastic synthetics, Low shrinkage	High temperature resist., Good adhesion on metals and sintered materials	Good adhesion to many materials, Various viscosities possible	Electroplating bath resistant, Excellent adhesion of metal coatings	Anaerobic curing in shadow zones, Good adhesion to metals

Smart cards							
Vitralit®	UV 2207	UD 8559	UD 5134	1728 HTG	1650	1600 LV	1671
Typical applications	Pin sealing relays	Pin sealing relays	Bonding, Sealing, Encapsulating el. parts	Sealing of plugs, Switches and relays, Fixing parts	Chip covering, Small chips	Glob-top sealant for larger chips	Dam compound
Viscosity (mPas)	5000 - 20000	1000 - 3000	15000 - 25000	150000 - 180000	6000 - 9000	5000 - 6000	250000 - 300000
Temperat. resist. (°C)	-40 to +150	-40 to +150	-40 to +150	-40 to +150	-40 to +150	-40 to +180	-40 to +180
Curing	VL	VL / Moisture-curing	UV / thermal	UV	UV	UV / thermal	UV / thermal
Colour	Opaque, Light yellow	Clear, Colourless	Grey-yellow, Viscous	Transluc./Reddish	Grey	Grey	Grey
Characteristics	High strength, Impact resistant, Dry surface after curing	UV- and moisture-curing	UV- and thermally curing	Thixotropic, Gap-filling, Low heat expansion	Flexible, Low water absorption, Grain size up to 150 µm	High chemicals resistance, High Tg, High strength	Stable, Wet-on-wet application with filler material, Ion-free

	Dome coating		Loudspeakers		Wire tacking		FiPG
Vitralit®	UC 6772	UV 3675	UV 2097	UV 2100	9187	UV 2135	2583
Typical applications	Epoxy-based dome coating	Dome coating	Plastics and metals, For bonding loudspeakers	Bonding plastics	Wire tacking, Coil wire fixation	Bonding, Sealing, Encapsulating plastics & el. parts	Form-in-place gaskets, Liquid gasket
Viscosity (mPas)	200 - 400	150 - 250	4000 - 6000	200 - 600	800 - 1200	2800 - 4500	65000 - 75000
Temperat. resist. (°C)	-40 to +150	-40 to +150	-40 to +150	-40 to +150	-40 to +120	-40 to +150	-40 to +180
Curing	UV	UV with black light filter	UV / thermal	UV / thermal	UV	VL	UV
Colour	Clear, Colourless	Clear, Colourless	Colourless	Colourl./Re-Act red	Yellowish, Transpar.	Clear, Yellowish	Transparent
Characteristics	Dome coating with optimised flowing behaviour	High-strength, Scratch-resistance, High-gloss surface	Also available with Re-Act	High ultimate elongation	Quick curing, Good adhesion to PC, PVC and PMMA	High strength, Impact-resistant, Quick-hardening thr. rubber modific.	Dry surface, Good tensility, Good resetting capacity

### Glass bonding

	UV 2770		UV 2771	6128	6133	6134	UV 2725	VBB-N
Typical applications	Bonding glass edge-to-edge, Lam./temp. glass - lam. glass		hard glass-glass/ metal (alu/st. steel), temp./lam. glass	Glass-metal/stone/ marble, thermo-plastic materials	Glass-metal/stone, lamin./temp.glass-metal, hard mat.	Glass-glass/metal/ granite, temp.glass, lamin. glass/metal	Large-surface glass-glass/ metal/stone	full glass display with high dyn. stress, vitrine for museum
Viscosity (mPas)	30 - 100		2.000 - 3.500	550 - 1000	600 - 1000	700 - 1000	200 - 400	50 - 150
Temperat. resist. (°C)	-20 to +120		-20 to +120	-40 to +150	-20 to +120	-20 to +120	-20 to +140	-40 to +140
Curing	UV	VL (LED 395)	UV	VL (LED 395)	UV	Thermal (120°C)	UV	VL (LED 395)
Colour	Clear, Colourless		Clear, Colourless	Transparent	Clear, Colourless	Clear, Colourless	Clear, Colourless	Clear, Colourless
Characteristics	LED-optimised curing, Excellent capillary action, High strength		Impact resistant UV resistant, No yellowing, Dry surface	Also combination curing (UV/heat), High strength and impact-resistant	LED-optimised curing, High strength and impact-resistant	LED-optimised curing, High strength and impact-resistant	High elongation at break, Very elastic, Good resistance to peeling	particular humidity resistant, UV resistant, No yellowing

### Medical equipment

	1702		6108 T	UV 4050	7641	7562	4731	VBB1
Typical applications	Medical plastics bonding, USP class VI		For glass/metal, USP class VI, ISO 10993	Bonding medical disposable articles, Thermoplastics	PMMA and PC edge-to-edge bonding	Glass/PC, Glass/ laminated glass/ tempered glass	PMMA, PC and glass surface bonding	Glass bevel bonds, Elast. edge-to-edge bond., Plastics/glass
Viscosity (mPas)	70 - 200		4000 - 6000	140 - 500	50 - 100	500 - 800	900 - 1500	1000 - 1500
Temperat. resist. (°C)	-55 to +135		-40 to +160	-40 to +150	-30 to +120	-40 to +150	-30 to +120	-40 to +150
Curing	UV		UV / VL / thermal & activator	VL	UV	VL (LED 395)	UV	VL (LED 395)
Colour	Amber		Transparent	Clear, Transparent	Clear, colourless	Clear, colourless	Clear, colourless	Clear, colourless
Characteristics	Good adhesion to plastics, Gas and irradiation sterilisation		Multifunctional, Excellent adhesion, Resistant to yellowing	Fluorescing, Bio-compatible, Resistant against ETO/ gamma sterilisat.	LED-optimised curing, Excellent capillary action, High strength	Flexible, For large-area bonds, Very low moisture absorption	LED-optimised curing, Elastic, Surface bonding PC und PMMA	LED-optimised curing, High flexibility, Good resistance to peeling

### Optics

### Special applications

	UV 2415		UV 2113	1508	6215	UV 2151	6122	UV 2606
Typical applications	PMMA/glass, PC/stainless steel, PC/aluminium		Thermoplastics	Chip fibre linking, FO cable bonding	Bonding, sealing, Encapsulating electrical parts	Bonding thermoplastics	Glass bonding, Mirror before metallisation	Foil laminates
Viscosity (mPas)	1500 - 2500		19000 - 32000	350 - 750	600 - 1500	500 - 2000	10000 - 14000	300 - 450
Temperat. resist. (°C)	-30 to +120		-30 to +120	-40 to +175	-40 to +180	-40 to +150	-40 to +120	-40 to +150
Curing	UV	VL (LED 395)	UV	VL (LED 395)	UV / thermal	UV	VL	UV
Colour	Clear, Yellowish		Grey-yellow	Transparent	Clear, Colourless	Clear, Colourless	Translucent	Clear, Colourless
Characteristics	Dry surface, Impact-resistant, High strength, High temper. /media resist.		Good adhesion to many materials	Low insulation, High Tg, Nanostructured fillers	Resistant to intermediate high temperatures up to 230 °C	Fluorescing	Flexible, Also for larger screens, Releases without residue at 400 °C	Completely clear, Impact-resistant, Dry surface

## UV lamps / UV LEDs

### Hönle UV lamps

are the ideal addition to our Vitralit® UV products and are ideally suited for curing adhesives, coatings, sealants and paints.

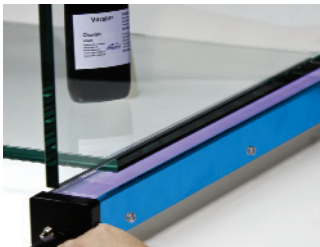
- UV hand lamps
- UV point sources
- UV flood lamps
- UV conveyors

Handy and compact, suitable for mobile and stationary systems, with homogeneous intensity distribution.



### Hönle UV LED lamps

UV LED arrays and UV LED flood lamps: the innovative UV technology that cures without heat generation! Ideal in combination with the specially developed Panacol UV LED adhesives.



The Hönle UV LED arrays are available in a range of lengths and provide an even energy density over their whole length.

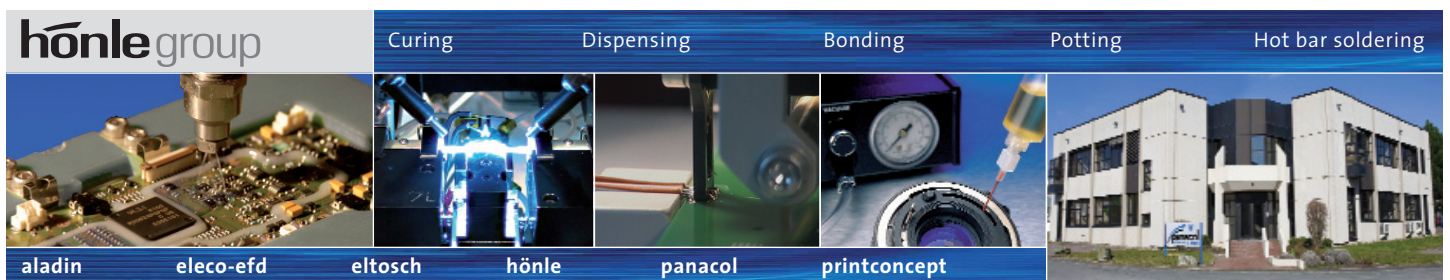
## Dispensing equipment

We can supply the suitable dispensing equipment for your application, from standard devices to custom-made machines. Ideal for precisely metered application of various low- and high-viscosity materials.



And we also have the suitable accessories.

You can find further information about our product groups in our special product data sheets. For our comprehensive range of accessories for each product series, please ask for our detailed information sheets.



Panacol-Elosol GmbH, Daimlerstr. 8, 61449 Steinbach/Taunus, Germany  
Phone: +49 6171 6202-0, Fax: +49 6171 6202-590. [www.panacol.de](http://www.panacol.de)

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