



Pressure Sensitive Adhesives and Sealer



ADHESIVE AND SEALER TECHNOLOGY

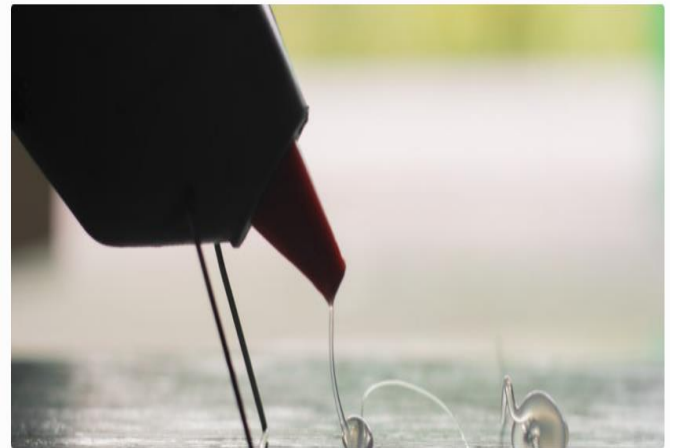
Solvent-based acrylate adhesives

This product range consists of solvent-based adhesives (PSAs) in organic solvents. Depending on the requirement and customer wishes, these are either in the form of pure acrylate adhesives or formulations modified with resins and/or crosslinking agents. This enables tailor-made property profiles, such as in relation to adhesive strength and shear strength, to be achieved. The table depicts the typical representatives of this product class in our portfolio.



Solvent-free acrylate adhesives

Our hotmelts are solvent-free systems, which are melted by the administration of heat and then applied. Depending on the requirement, either pure acrylate-based hot melts or formulations modified using resins and/or plasticisers can preferentially be used. The performance of our hot melts can be individually varied to fulfil the requirements for the relevant operating range.



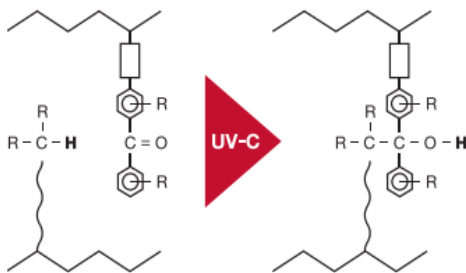
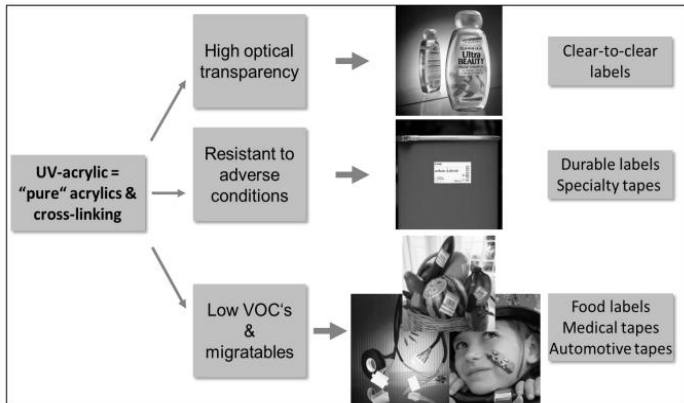
Acrylate-UV adhesives are resins which polymerize and therefore cure under UV light. These products are used mainly in industrial settings because they cure within seconds, allowing a high production output.

UV adhesives can be cured with both UV gas discharge lamps and UV LED lamps. Unlike LED light sources, which emit monochromatic light, gas discharge lamps have a broad light spectrum. For curing adhesives, the UV portion at different wavelengths within the light spectrum of gas discharge lamps is used at the same time, while the light spectrum of LEDs is limited to a specific wavelength. Some special acrylates also cure under visible light. These are used, for example, for bonding UV-impermeable plastics.



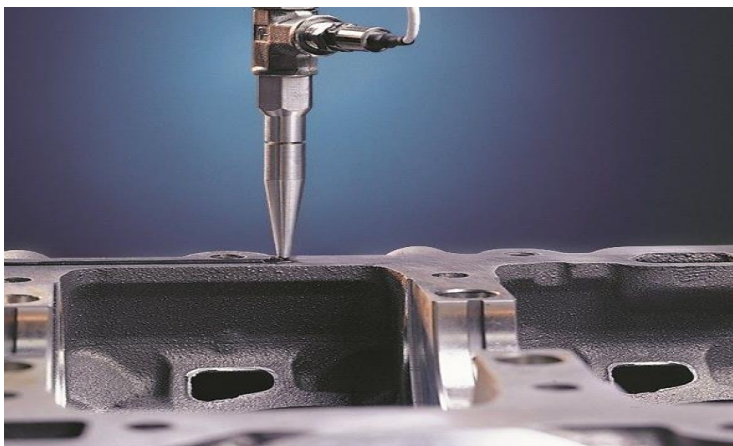
Significant sustainability benefits

Adhesive tapes and labels produced with **KYNTECH ADHESIVES** are characterized by minimal VOCs and odor. As a more sustainable alternative to solvent-based raw materials, they are particularly suitable for sensitive applications and can even be used in the medical and food sectors.



Adhesive for durable labels:

KYNTECH ADHESIVES versus solvent-based acrylics. When it comes to durable labels, performance is everything. Typical requirements include resistance to chemicals, high temperatures and weathering.



Easy, cost-efficient curing

KYNTECH ADHESIVES can be processed on hotmelt coaters equipped with UV lamps. No solvent or water needs to be removed because it is 100% acrylate. This increases the cost-efficiency of processing significantly.

Easy, cost-efficient curing

When irradiated with UV-C light, the potentially reactive groups attached to the chains from crosslinks with neighboring reaction is instantaneous, but remains easy to control it stops as soon as the UV-C radiation is removed.

Photoreactive crosslinking

The photoreactive groups in the KYNTECH Resins attack the C-H bonds present in neighboring chains, resulting in the crosslink structure typical of pressure-sensitive adhesives. UV-C sensitive photoreactive groups are an integral part of the polymer and therefore non-volatile, which explains why no products of potential toxicological concern are released.

KYNTECH ADHESIVES

brand is the BEST CHOICE for engineered, high-performance adhesive, sealant and coating solutions.

KYNTECH UV-COL; UV-Hotmelt acrylic adhesive, polyurethane dispersion

Product	Characteristics	Solid Content [%]	Viscosity [mPa.s]	Application
UV-COL T 1000	Acrylic polymer	100	8.000 – 12.000 / 140°C	Removable adhesives
UV-COL UV 1001	Acrylic modified polymer	100	1.500 – 2.500 / 140°C	UV-adhesives, adhesive for the tapes, labels and graphics industry.
UV-COL UV 1002	Acrylic modified polymer	100	3.000 – 4.000 / 140°C	UV-adhesives, adhesive for the tapes, labels and graphics industry.
UV-COL UV 4605	Acrylic copolymer	100	-	UV acrylic range comprises high-resistance adhesives for numerous label applications, including clear labels, general purpose permanent labels, removable & reclosable labels and specialty labels.
UV-COL UV 2117 H	Ester of hydrogenated rosin	100	1.500 / 120°C	Adhesives / sealants- b&c, bookbinding, caps & lids-food content, carpet construction.
UV-COL 4305	Cyanacrylate	100	-	For plastic, metal, paper, very rapid fixturing, UV light cure properties.
UV-COL 9533	Acrylic modified copolymer	100	18.000 – 22.000 / 20°C	Automotive, building construction, adhesives for numerous label applications,
UV-COL 2677	Acrylic copolymer	100	1.000 – 2.000 / 20°C	UV-adhesives, for adhesives medical applications, adhesive tapes and labels.
U 56	Anionic, hochmolecular polyurethane dispersion	50 in water	50 – 900	For the formulation of thermally activated adhesives for use in, for example, the automotive, furniture, shoe and construction industries.
UV-COL K 2525	Acrylic modified	42 in iso-propanol	3.000 – 6.000 / 20°C	For general applications.
UV-COL 21151 H	Acrylic coploymer	100	17.000 – 27.000 / 130°C spindel 27, 4 UpM	UV-curable, acrylic pressure sensitive hotmelt for labels and transparent film labels (no label look). Recommended working temperature: 120 to 130 °C.

Tapes, Labels, Graphics

Sustainability and security are key elements of tape and label applications.

KYNTECH UV-COL and UV-TEC products offer substantial Sustainability benefits and is ideal choice for the production of medical tapes.



KYNTECH UV-TEC; solvent free, UV-Hotmelt acrylic adhesive; PSA's

Product	Characteristics	Solid Content [%]	Viscosity [mPa.s]	Application
TEC 4185	Acrylic polymer	52.5	2.000 – 5.000 / 20°C	Pressure-sensitive adhesive, (PSAs).
TEC 235	Acrylic modified polymer	30	1.500 – 3.500 / 20°C	Pressure-sensitive adhesive, (PSAs).
TEC 303	Acrylic modified polymer	39.5	2.000 – 5.000 / 20°C	Adhesive for the tapes, labels and graphics industry.
TEC 380	Acrylic copolymer	42	3.000 – 6.000	Industrial pressure-sensitive adhesive, (PSAs).
TEC 204 UV	Acrylate polymer	solvent free	20.000 – 30.000 / 150°C	Solvent-free, UV-hotmelt adhesive.
TEC 234 UV	Acrylate polymer	solvent free	30.000 – 40.500 / 150°C	Solvent-free, UV-hotmelt adhesive.
TEC 250 UV	Acrylate polymer	solvent free	20.000 – 30.000 / 150°C	Solvent-free, UV-hotmelt adhesive, Automotive.
TEC 260 U	Acrylate polymer	solvent free	20.000 – 30.000 / 23°C	Solvent-free, UV-hotmelt adhesive, PSAs, Automotive.
TEC 105	Acrylate polymer	solvent free	20.000 – 30.000 / 23°C	Solvent-free, hotmelt adhesive, PSAs.
TEC 3532 UV	Acrylate polymer	Solvent free	20.500 – 50.500 / 23°C	Solvent-free, hotmelt adhesive, PSAs.
TEC 9500 UV	Acrylate polymer	solvent free	10.500 – 20.500 / 100°C	Solvent-free, UV-hotmelt adhesive, PSAs.
TEC K3	Acrylic modified polymer	78	5.000 – 10.000 / 20°C	Hotmelt, Automotive.

Adhesives for durable Labels: TEC Solvent-based acrylics

When it comes to durable labels, performance is everything.

Typical requirements include resistance to chemicals, high temperatures and weathering.



Food Contact Suitability

KYNTECH TEC products (TEC 204 UV, 250 UV, 260 UV and 3532 UV) are covered under the European Framework-Regulation (EC) No 1935/2004, the European GMP-Regulation (EC No. 2023/2006, the European Biocides-Regulation (EU) No. 528/2012 and §§ 30 and 31 of the German Food and Feed Ordinance (BGBl No. 55 of 06.09.2005), including all respective amendments valid at the date of issue and as such, are intended for use as a component of UV-cured pressure-sensitive adhesives used at the food-contact surface of labels and/or tapes.

Innovative solutions for adhesive raw materials for pressure sensitive specialty tape and graphic arts



Adhesive Performance

UV cured PSAs share many common characteristics with solvent-based adhesives. With the exception of a lower shear level, the adhesive performance tends to be similar to traditional solvent-based adhesives. In addition, these adhesives also offer a good resistance to heat, moisture and chemicals, although not to the level of a solvent-based adhesive.

The main benefit of these UV adhesives over solvent-based adhesives is extremely low levels of VOCs and odors. Since they are made without solvents or other potentially hazardous process aids, they are a particularly good fit for applications in strict regulatory environments like medical or automotive applications.

In addition to standard adhesives, the challenging nature of UV cured PSA applications often requires specifically formulated, customized adhesive solutions. Working closely with our customers, our scientists and engineers can quickly adjust existing adhesive platforms or develop new polymer systems to address the most complex challenges.



KYNTech Adhesives Meet Every Challenge

PRESSURE-SENSITIVE
ADHESIVES



VARAPEEL

Water-based removable coating resin

A fast drying water-based acrylic for removable coating for protection in harsh, outdoor, unsheltered applications.

Provides multimetal protection. Excellent UV resistance.

Applications

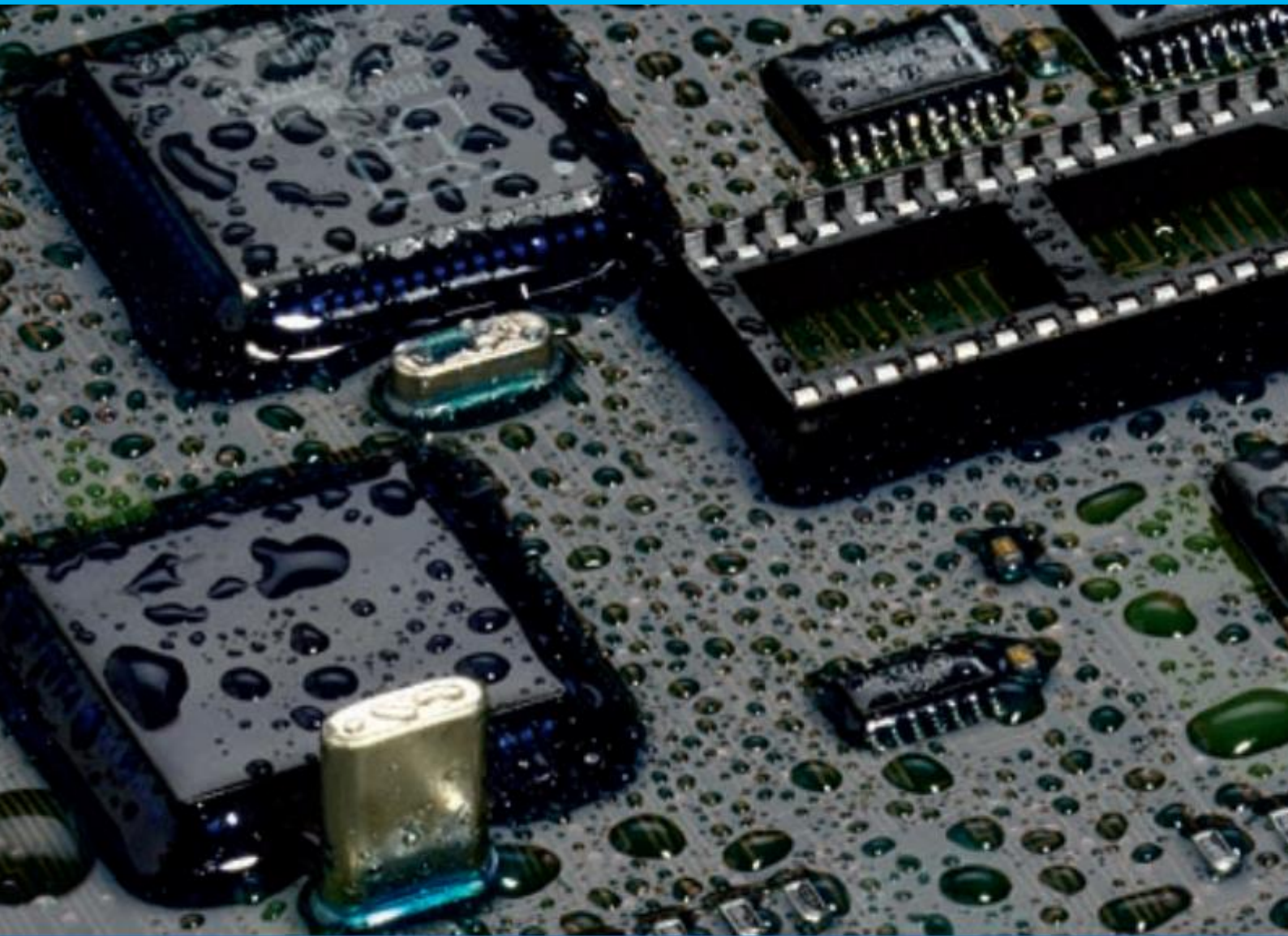
- Automotive
- Mining machinery
- Marine
- Aviation
- Filming & studio use
- Construction industry
- Fibre glass industry
- Metal works and fabrication
- Brass, copper & aluminium protection
- Spray booths
- Signage and advertising
- Protection of pre-painted surfaces
- Stop-off coating in electroplating
- Glass and glazing industry
- Casting moulds



ELECTRONIC PROTECTION SYSTEM

VARATRON ACRYLIC THIN FILM COATING

Thin Film Coating; transparent, self-extinguishing according to UL 94 V0



Superior Protection
Humid Environment



VARATRON; High molecular acrylic for electronic protection system

Product	Characteristics	Solid Content [%]	Viscosity [mPa.s]	Application
VARATRON PL 1102	High molecular, acrylic modified polymer	20.5	50 ± 10/ 23°C	Acrylic, thin film build, electronic protection coating. air drying, ready to use in spray or dip application, UV tracer, excellent air release & substrate wetting. Non-fogging per DIN 75201
VARATRON PL 1104	Acrylic modified polymer	20.5	50 ± 10/ 23°C	Electronic protection coating. VARATRON PL 1104 passes tests according to IPC CC-830-B, MIL I 46058 C and IEC 61086.

VARATRON PL 1104 is a transparent conformal coating based on acrylic chemistry. The development of VACTRON PL 1104 meets the latest requirements of electronics, low pin corrosion, excellent edge coverage and fast curing at low temperature. The varnish provides superior performance in dielectric properties and moisture protection under environmental stress. VACTRON PL 1104 is lead free and satisfies requirements of the ROHS Directive. VARATRON PL 1104 passes tests according to IPC CC-830-B, MIL I 46058 C and IEC 61086.

Application

Coating of electronics:

- PCB's used in automotive and marine navigation
- Hybrids
- SMD devices
- discrete components

Main Properties of Vactron PL 1104

Rapid curing at RT & heat accelerated

High volume resistivity including humid conditions

Good dielectric properties in thin films

Resistant to moisture and dust contamination

Withstands weak acids & alkalis

Good adhesion under thermal cycling

Temperature resistance 130°C

Easy rework for repair

Inspection of coated area is possible under UV light

Self-Extinguishing according to UL 94 V0

Processing

The coating varnish VARATRON PL 1104 was developed for automatic selective coating equipment. It can be applied by dipping, spraying (atomisation with air or cross cut nozzle) or brushing. The recommended viscosity for selective coating correlates to 40 seconds in 4-mm-cup (DIN/EN/ISO 2431) at ambient temperatures. VARATRON PL 1104 could be used at temperatures above room temperature in circulating Systems. For dipping, thinner Vactron 217 can be added to obtain the recommended viscosity. A single coating ensures good dielectric insulation and complete protection against humidity. The surface of the dip tank should be as small as possible. If the tank is not in use it should be kept closed to prevent evaporation of solvents of the varnish surface. In order to achieve satisfactory wetting and fault-free adhesion of the coating varnish it is important to ensure compatibility with the solder resist, paste and flux.

Curing

Air curing 23°C Cured 90 minutes

dust dry 25 minutes

Oven curing up to 80°C within approx. 15 minutes

Time depends on oven air flow & ventilation

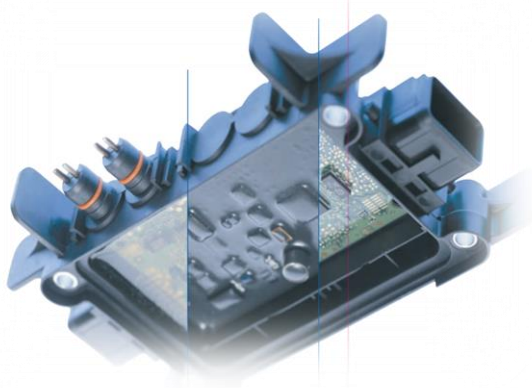


VARATRON for Automotive

for highest electronic performance

Thin Film Coating

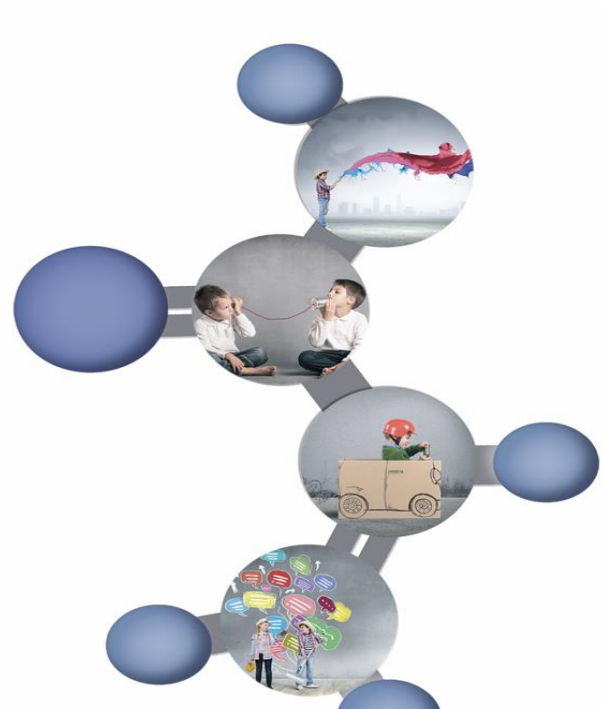
- lead free, no aromatics
- fast curing
- good temperature cycling
- UL-listing 94 V0



VARENA CHEMICAL is a global company in the intermediates, coating, adhesives, inks and composite and solid surface resins, thermoset compounds, gel-coats and niche specialties and specialty additives for coatings and inks.

VARENA CHEMICAL is known for its superior quality and impressive range of products and with its excellent distribution network it can provide first-class service to customers whatever their market. Customer Service and Technical Service teams are renowned for their customer focus, offering the best service even after products have left manufacturing.

The group strives to keep customers satisfied, assisting them in producing premium quality products every time they use its products.



Product innovation is important for the group’s business and it’s the reason for which it constantly works with customers to find solutions to problems.

Introducing new or improved products ensures that VARENA CHEMICAL continue not only to deliver what the market wants and needs, but also when it is wanted and needed.

