Michael Hartmann
Laboratory Manager

OUR NEW ONE

THE SCREEN PRINTING INK FOR PLASTIC CONTAINERS OF ALL KINDS!

84UV

The 84UV is redesigned

as a universal ink with a wide range of applications for the decoration of plastic containers and plastic parts. In addition to pre-treated (flamed) polyethylene (PE) and polypropylene (PP), the inks also adhere to PVC and other various plastics such as PC or ABS. Due to the difference between the materials, it is explicitly recommended to carry out preliminary tests. The ink series is solvent-free, contains silicone and is highly reactive. **84UV** is supplied in a ready-to-print adjustment and shows high viscosity which enables processing at higher temperatures.

84UV inks cure quickly resulting in a high-gloss finish. Initial adhesion is excellent. Prints show good adhesion and high chemical resistance. For particularly difficult substrates, the hardener Additive UV/H can can optionally be used to improve adhesion. **84UV** can be cured with conventional UV-Hg lamps as well as with UV-LED technology. **84UV** inks are suitable for indoor and short-term outdoor applications.

84UV is not suitable for food packaging applications.

- **Reactivity: Very high to high, approx. 150-200 mJ/cm²**
- **Solvent-free, silicone-containing**
- **For pre-treated PE and PP as well as PVC and other plastics**
- **Very high initial adhesion and good scratch resistance**
- **Ready to print with high viscosity and therefore also processable at higher temperatures**
- **Very high gloss level**

COLOUR SERIES

With main application in graphic screen printing

Our colour series are constantly changing and must always be adapted to the latest specifications. One example is the photoinitiator TPO, which we banned from our formulations in 2023 for regulatory reasons. The UV monomer N-vinyl caprolactam (NVC) has long since been replaced in the ink series. In addition, customer applications are changing, which we want to take into account with our product range.

Get to know our current UV product range and convince yourself of the high-quality application possibilities.

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Color & Comfort

UVN
A classic

Reactivity: High, approx. 250 mJ/ cm²/* For PVC and other high-quality films

Originally developed and used for graphic screen printing for posters, UVN was later increasingly used in the label sector. This is where it now plays to its strengths by combining good adhesion with high chemical resistance. It is well suited for all PVC materials and other lacquered label materials, as well as high-quality films. The UVN inks show good weather resistance and are suitable for outdoor use.

Their reactivity is relatively high and therefore sufficient for use on fast machines. In addition to the bright colours, UVN also offers a whole range of different special colours such as fluorescent and phosphorescent colours.

UVX2
The elastic

Reactivity: Very high approx. 150 mJ/ cm²/* Especially for PVC self-adhesive films

Especially with high ink layer thicknesses, on PVC self-adhesive films, UV inks often show significant embrittlement and a loss of impact resistance. The UVX2 ink series has been developed with the best possible elasticity and flexibility in mind to avoid such disruptive factors on PVC.

PVC adhesive films printed with UVX2 can also be applied without any problems to non-flat surfaces over edges and unevenness such as grooves and folds. UVX2 is highly reactive and can therefore also be processed on fast printing machines. The prints with these inks are elastic/flexible without subsequent embrittlement, which is why UVX2 is also successfully used for the production of double-sided stickers. The extra opaque white setting UVX2 60/688-HD, which is mixed with 3-4 % special silver B 79/13, acts as a light barrier layer. Since UVX2 also has excellent light and weather resistance, it is also predestined for vehicle decals and other outdoor applications.

Viograph VGP
NEW: The Universal

Reactivity: High, approx. 250 mJ/ cm²/* wide range of applications

The Viograph VGP ink series is a cost-effective, universal UV screen printing ink for many graphic applications with a wide range of substrates.

End-use applications include billboards, signs, PP multi-wall sheets, self-adhesive stickers, window decorations, corrugated cardboard, banners and much more. It shows excellent adhesion to paper, cardboard and most plastics (PVC, ABS, PETG, Acrylic, PS, PC) commonly used for screen printing graphics. In addition, VGP is adapted for fast and user-friendly operation on large-format multi-colour presses.

With its fast curing and silky glossy appearance, it shows very good printing results on many substrates. It is also suitable for limited outdoor use.

MTR
For thermoforming

Reactivity: Medium to high, approx. 300 mJ/ cm²/*Wide range of applications

The Musketeer MTR is a special ink system that is used for screen printing on plastics that are thermally formed during further processing (thermoforming). The substrate range includes the thermoplastics rigid PVC, polystyrene, polycarbonate, acrylic glass, and PET-G. With its medium reactivity, the MTR shows a medium-term outdoor resistance. Due to their flexibility, the stackability is limited. The colour range of the series includes our C-MIX mixing colours, 4c process colours as well as white and black with high opacity. Other colours available on request.

UV-650018
For plastic parts

The UV-650018 screen printing ink series is preferred for decorating moulded plastic parts, writing utensils and cosmetic articles (cream jars, mascara tubes) made of ABS and polycarbonate (PC). After plasma pretreatment, moulded parts made of polypropylene (PP) can often also be printed with UV-650018 (if necessary with hardener Additive UV/H). The inks are supplied in a ready-to-print adjustment and cure quickly resulting in a glossy ink film with very good mechanical abrasion resistance and high chemical resistance.

UV-650018 is suitable for indoor and medium-term outdoor use.

* *Energy values based on measurement with a Kühnast UV integrator. These data are only to be understood as non-binding guideline values.*

COLOUR SERIES

Technical applications

PDH NEW
For membrane switch overlays

Reactivity: Medium to high, approx. 300 mJ/ cm²/* For PC, PVC, pre-treated polyester

The Panel Hytek PDH ink series is designed for printing on polycarbonate and pre-treated polyester. The main applications are printing of high-quality backlit decorative motifs for billboards, membrane switch overlays, vending machines, industrial labels, automotive applications and various similar applications.

The PDH series shows exceptional flexibility and resistance to delamination, which is why prints can easily be formed and can then be applied with double-sided adhesive tapes.

UVPO
For polypropylene and more

Reactivity: Medium to high, approx. 300 mJ/ cm²/* For pre-treated Polypropylene (PP)

Polypropylene, a challenging substrate, is mainly processed in graphic screen printing in the form of double-wall sheets or rigid films. After a Corona pre-treatment, this material can be printed very well with suitable UV inks. UVPO has been specially developed for the decoration of these PP substrates, also for processing on multi-colour lines.

Especially when maximum ink adhesion in combination with extremely high wet strength is required, UVPO is still the first choice. The ink shows medium outdoor durability.

Polystyrene (PS), especially high-gloss grades, ABS, polycarbonate (PC) and also various acrylic glass types (interior application) are also included in UVPO's range of substrates.

NVTGL
Specialist for glass

Reactivity: High, 250-350 mJ/cm²/* For flat glass and glass containers

SunVetro NVTGL is a UV ink formulated with organic raw materials for direct printing on glass (e.g. drinking glasses, bottles, ceramics and cosmetic containers). Processing is carried out in 2- or 3-component form with adhesion promoter and hardener. The respective pot life must be taken into account. If the highest possible resistance is required, thermal post-treatment of the prints is recommended (approx. 140°C/30 min.). Prints with NVTGL are dishwasher-proof and resist the attack of solvents (ethanol, acetone). It is suitable for indoor and short-term outdoor applications.

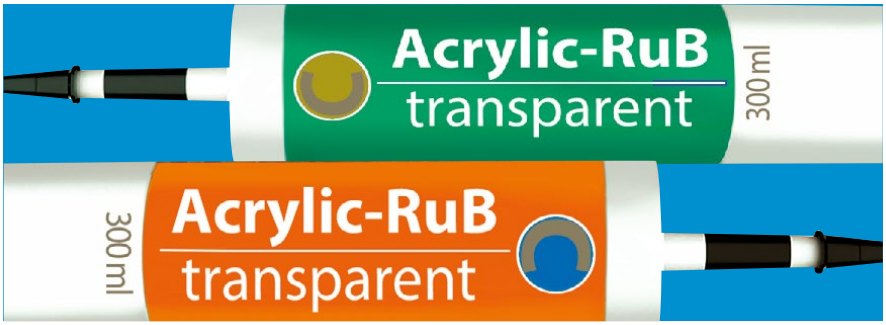
UV/K
For metals and more

Reactivity: Low, from approx. 1000 mJ/ cm²/* For metal, painted surfaces, thermosets

UV/K is also an ink series that has been tried and tested for many years. It was originally used and is still used very successfully as a marking ink on printed circuit boards in the electronics industry. This application requires the highest resistance to various chemicals. In the meantime, the range of applications has expanded to include the decoration of elements made of aluminium, stainless steel or lacquered materials. UV/K is used, for example, for the front panel decoration of household appliances, back covers of electrical appliances (DVD players, etc.) and various nameplates. In particularly difficult applications, UV/K can also be processed as a two-component system by adding 5 % hardener Additive UV/H, especially to increase the adhesion. UV/K is not recommended for medium or long-term outdoor applications due to its special binder resins.

COLOUR SERIES

Packaging
printing



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80UV
For cartridges and co.

Reactivity: Very high, approx. 100 mJ/cm²/* Optional: Hardener Additive UV/H addition 5 %. For HDPE and PP container printing

80UV is used for printing on various containers made of pre-flamed polyethylene (HDPE) or polypropylene (PP). The focus is on hard materials such as cartridges or bottles.

80UV is mainly used on high-speed multi-colour printing presses, where the highest cycle rates of 100 pieces/minute and more can be run. The ink is highly reactive and has a high-gloss finish. Usually, the ink is processed without hardener. If above-average resistance values are to be achieved, the ink can also be processed as two component ink by adding 5 % Hardener Additive UV/H.

The basic colour range of this high-gloss ink series is the C-Mix 2000 series in LL version with medium light fastness values. For matching Pantone PMS, HKS and RAL colours, there are guidline recipes in our "Formula Management Packaging Printing" database.

833UV-SF
The silicone-free ink for tubes

Reactivity: Very high, approx. 100 mJ/cm²/* For pre-treated Soft tubes made of polyethylene (LDPE)

The 833UV-SF screen printing ink series is used to decorate plastic tubes made of pre-treated polyethylene (LDPE), which are then over-printed with varnish.

833UV-SF has a very high reactivity and is also suitable for banderole printing due to pinning. 833UV-SF comes in ready-to-print adjustment with medium viscosity and cures very quickly to a high-gloss ink layer with good adhesion and high chemical resistance. 833UV-SF is therefore optimised for printing on high-speed screen printing machines for tube printing. Thanks to its silicone-free formulation, 833UV-SF can also be combined with flexographic printing applications and can then be over-printed and embossed with many common roller coatings. 833UV-SF can be cured with conventional UV-Hg lamps as well as with UV-LED technology. In order to obtain a reliable ink adhesion of 833UV-SF to PE plastics, a pre-treatment, preferably with flame, is absolutely necessary.

84UV NEW development
For plastic containers of all kinds

Reactivity: Very high to high, approx. 150-200 mJ/cm²/*For pre-treated PE and PP, as well as PVC and other plastics

The 84UV has been redesigned as a universal ink with a wide range of applications for the decoration of plastic containers and plastic parts. In addition to pre-treated (flamed) polyethylene (PE) and polypropylene (PP), the inks also adhere to PVC and other various plastics such as PC or ABS. Due to the difference between the materials, it is explicitly recommended to carry out preliminary tests.

- The ink series is solvent-free, silicone-containing, with very high reactivity.
- 84UV is delivered in a ready-to-print adjustment with high viscosity and can therefore also be processed at higher temperatures.
- 84UV cures very quickly to a high-gloss ink layer with good adhesion and high chemical resistance and shows a very high initial adhesion. The hardener Additive UV/H can optionally be used to improve adhesion.

84UV can be cured with conventional UV-Hg lamps as well as with UV-LED technology. 84UV is suitable for indoor and short-term outdoor applications.

The 84UV inks are not recommended for food packaging applications.

852UV
Low migration ink

Reactivity: Very high approx. 100 mJ/cm²/* For containers made of pre-treated PP and PE

The 852UV screen printing ink series is used to decorate plastic containers made of pre-treated polyethylene (LDPE, HDPE) and polypropylene (PP) such as cartridges, cans, bottles, tubes, etc. The 852UV ink series is solvent-free, with very high reactivity.

852UV is delivered in ready-to-print adjustment with medium viscosity and cures very quickly to a high-gloss ink layer with good adhesion and high chemical resistance.

852UV is formulated for printing on high-speed screen printing machines for container printing.

852UV is suitable for indoor and short-term outdoor applications. 852UV offers a significantly reduced migration potential in terms of acrylate monomers and photoinitiators compared to the 80UV and 833UV-SF ink series.

The 852UV ink series can be suitable for sensible non-food packaging, however compliance must be verified by migration tests with the printed item.