

NewV[®] UV-metal-pigmented inks

Metal-pigmented, 2-component inks contain additives that help to stabilise the metallic surface and prevent it from oxidising and are therefore necessary to ensure the metallic lustre is maintained. These substances have negative effects on UV-resistant roller coverings and rubber blanket materials (e.g. EPDM) and cause swelling. This results in printing problems in the production run caused by apparent piling on the ink roller coverings when working with such types of ink.

Roller coverings such as those used for alternating between conventional and UV processing are suitable for use with metal-pigmented UV inks. If the rollers you use are made of pure EPDM, we can also supply you with 1-component UV gold and silver ink systems. Depending on the substrate, however, the metallic effect produced by the 1-component UV gold inks may be slightly less metallic, but all other application-related aspects apply equally to both systems.

When printing UV-curing bronze inks wet-on-wet, copper precipitation may occur on the printing plates of downstream printing units.

This leads to the copper pigments of the bronze inks being applied together with the actual ink to be applied from these units and consequently to scumming. This can be remedied by using imitation gold inks based on ground aluminium powder or by printing bronze ink from the last printing unit.

To obtain a perfect metallic effect, the pH should be no lower than 5.5. The printing characteristics of UV metallic inks can be made more stable by adding a mixture consisting of tap water and 8 – 10% isopropyl alcohol (without adding a fount solution additive).

Mixtures of metal pastes and UV-curing varnishes tend to polymerise (cure) very quickly. For this reason, both should only be mixed immediately prior to being printed on the press. Mixing with pigmented UV inks can greatly shorten the amount of time available for applying the mixed metallic ink.

From a technological point of view, special effects with metallic inks can be implemented most easily with the aid of the UV MFX ink system (see TI 5.01.03 „NewV MetalFX 5100 UV“).

Range of applications

The 2-component, metal-pigmented inks are suitable for:

- Coated and uncoated papers and card stocks
- Pretreated (corona or gas flame) or preprimed, non-absorbent substrates such as PE, PVC, PS, PP, etc.
- Aluminium-vaporised board and paper
- Aluminium foils

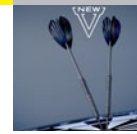
*The 1-component, metal-pigmented inks are suitable solely for printing coated and uncoated papers and card stocks.

Postprint finishing

The best metallic effect is obtained on coated stocks that have a uniform, smooth surface, because the metallic effect can not be enhanced by means of excessive inking. As a rule, this simply leads to printing problems such as piling, poor curing and insufficient smudge resistance.

One rule that has proven useful, especially in solid image areas, it never to print silver ink from the last unit. Smoothing the print with an additional rubber blanket, without UV inter-station drying, helps to enhance coating quality.

Adhesion problems arise very frequently during postprint finishing of metal-pigmented offset prints.



In this case, we recommend you carry out a pre-production test (to test adhesion and scratch resistance).

Following UV curing, UV metallic inks are suitable for inline or offline UV varnishing. Application of a UV varnish or lamination, however, greatly reduces the metallic effect.

If the print is to be laminated, you must always carry out tests prior to beginning the print run.

Prints made with UV metallic inks (and not varnished) are not suitable for products to be glued, for blister packs, hot foil stampings, etc.

Product overview

2-component system			How supplied
Silver (2-component system)			
UV Silver Paste		46 U 9000	0,3 kg
UV Varnish for Silver		40 U 2000	0,7 kg
Mixture ratio: 30% paste: 70% varnish			
Bronze (2-component system)			
UV Rich Pale Gold Paste	(per PANTONE 873)	46 U 9001	0,4 kg
UV Rich Gold Paste	(per PANTONE 871)	46 U 9002	0,4 kg
UV Pale Gold Paste	(per PANTONE 874)	46 U 9003	0,4 kg
UV Varnish for Bronze Inks		40 U 2001	0,6 kg
Mixture ratio: 40% paste: 60% varnish			
Copper (2-component system)			
UV Copper Paste		46 U 9004	0,4 kg
UV Varnish for Copper		40 U 2002	0,6 kg
Mixture ratio: 40% paste: 60% varnish			
1-component system			How supplied
UV 1-comp. Gold	per PANTONE 871	46 U 0871	1,0 kg
UV 1-comp. Gold	per PANTONE 872	46 U 0872	1,0 kg
UV 1-comp. Gold	per PANTONE 873	46 U 0873	1,0 kg
UV 1-comp. Gold	per PANTONE 874	46 U 0874	1,0 kg
UV 1-comp. Gold	per PANTONE 875	46 U 0875	1,0 kg
UV 1-comp. Gold	per PANTONE 876	46 U 0876	1,0 kg
UV 1-comp. Silver	per PANTONE 877	46 U 0877	1,0 kg

Classification

Safety Data Sheet available on request.

Shelf life

At least 12 months for 2-component systems or 6 months for 1-component systems when stored under the correct conditions (20°C, protected against heat and light).

Contact addresses for advice and further information can be found under www.NewV-inks.com

This Technical Information sheet reflects the current state of our knowledge. It is designed to inform and advise. We assume no liability for correctness. Modifications may be made in the interest of technical improvement.