



## NewV metal pigmented UV inks

UV curing metallic inks for sheet-fed offset, rotary and narrow web offset

### General properties

NewV metal pigmented inks give a special look to the printed product. They have good brilliance and metallic effect, good printability and consistency during the printing run. The products listed in this technical information sheet are suitable for conventional mercury lamps.

All the following UV metal pigmented inks can be used for sheet-fed, web-fed offset and book printing.

NewV metallic inks are VOC free.

### Direction to use

Metal-pigmented two-component inks contain additives that help to stabilise the metallic surface, prevent the oxidation to keep the required metallic gloss of the ink layer. These substances have negative effect on UV-resistant roller coverings and rubber blanket materials (e.g. EPDM). During the printing run piling and swelling problems may occur.

Roller coverings that are used for alternating between conventional and UV printing are suitable for metal-pigmented UV inks. In case of EPDM blankets one component gold and silver ink systems needs to be used. Depending on the substrate, the metallic effect of the one-component UV gold inks may be slightly less metallic, but all the other application related aspects apply equally to both systems.

When printing wet-on-wet UV-curing bronze inks, you can notice copper deposition on the printing plates. This may lead to scumming (toning). It can be avoided by using imitation gold inks based on ground aluminium powder or by printing the bronze ink from the last printing unit.

To obtain a perfect metallic effect, the pH-value cannot be lower than 5.5. By the reason of the printing characteristics of the metallic inks there is a possibility to use only 8-10% of isopropyl-alcohol in the dampening, without adding fountain solution additive.

Mixtures of metal pastes and UV-curing varnishes tend to polymerise (cure) very quickly. For this reason, they need to be mixed right before the printing starts, not sooner. After mixing two components together, the print has to start.

### Postprint finishing

The best metallic effect is obtained only on coated stocks that have an even, smooth surface, because of the reflexion of the light:



The metallic effect cannot be enhanced by increasing the ink thickness. This simply leads to printing problems like piling, poor curing, very low smudge and rub resistance.

There is a rule, especially for solid image areas: never print silver ink from the last unit. Smoothing out the print with passing under an additional blanket before curing helps to enhance coating quality.

These UV metallic inks are suitable for inline or offline UV varnishing, but please consider, the application of UV varnish or lamination significantly reduces the metallic effect.

If the print is to be laminated, prior tests are always necessary before the printing run. UV prints (without UV varnish) are not suitable for gluing, blister packaging, hot foil stamping, etc.

Adhesion problems arise very often during post-print finishing of metal-pigmented offset prints. In this case, we recommend you to carry out pre-production adhesion and scratch resistance test.

## Range of applications

### Two component products - for non-absorbent and absorbent substrates

- Coated, uncoated papers and cardboards
- Pretreated (corona /gas flame) or primed, non-absorbent substrates such as PE, PVC, PS, PP, etc.
- Aluminium-vaporised cardboard and paper
- Aluminium foils

Non-absorbent substrates must have a surface tension at least 38 mN/m in order to ensure the optimum ink adhesion. We recommend obtaining adhesion test before beginning the print run.

Two-component systems (2K) for non-absorbent and absorbent substrates			
Description	Sales code	Mixture ratio	How supplied
<b>Gold-Bronze</b>			
NewV pack Varnish Gold	40UG2001	60%	1,2 kg
NewV Rich Pale Gold Paste – 2K	46U8150	40%	0,4 kg
NewV Rich Gold Paste – 2K	46U8050	40%	0,4 kg
NewV Pale Gold Paste – 2K	46U8250	40%	0,4 kg
<b>Copper</b>			
NewV pack Varnish Copper	40UG2002	60%	0,6 kg
NewV Copper Paste – 2K	46U8250	40%	0,4 kg
<b>Silver</b>			
NewV pack Varnish Silver	40UG2000	70%	1,4 kg
NewV Silver Paste – 2K	46U9000	30%	0,6 kg

### One component PANTONE metallic colour shades

The following NewV systems are available for coated and uncoated papers and cardboards.

One-component inks – for absorbent substrates only			
Description	Sales code	Mixture share	How supplied
<b>Gold</b>			
NewV pack PANTONE Gold 871	46UG0871	Ready to use	1,0 kg
NewV pack PANTONE Gold 872	46UG0872	Ready to use	1,0 kg
NewV pack PANTONE Gold 873	46UG0873	Ready to use	1,0 kg
NewV pack PANTONE Gold 874	46UG0874	Ready to use	1,0 kg
NewV pack PANTONE Gold 875	46UG0875	Ready to use	1,0 kg
NewV pack PANTONE Gold 876	46UG0876	Ready to use	1,0 kg
<b>Silver</b>			
NewV pack PANTONE Silver 877	46UG0877	Ready to use	1,0 kg

## Food packaging

The products listed above are not suitable for printing primary food packaging. More information on the subject of packaging for food and tobacco can be found in the information sheet *50.G.002 NewV for food packaging* and on the webpage of the European Printing Ink Association: [www.eupia.org](http://www.eupia.org).

In case you are interested in UV metallic for the applications mentioned above, please contact us for recommendations.

## Light fastness

The ready-mixed colours have a light fastness of 8.

## Classification

Safety Data Sheet available on request.

## Shelf life

The minimum shelf life of these products is 12 months for two-component systems and 6 months for one-component inks from the production date if the container is not opened. But dependent on the storing and handling conditions, they can be usable much longer. For extending the warranty period, please contact our sales representatives.

Further information: Store between 5 - 25°C. Higher storage temperature may reduce shelf life. Protect from frost and sunlight. The cans need to be closed back immediately after usage.

## Packaging

See tables above.