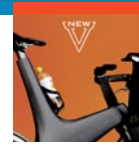




## Technical information

5.08.07 | 06.2009 | UV-curing inks and lacquers



# NewV flex<sup>®</sup> UV metal-pigmented inks

Radical-curing, solvent-free, stable, one-component UV flexo inks based on gold bronze and aluminium pigments, for printing on paper, board and various non-absorbent substrates. Can be used for both narrow web and wide web flexo printing.

The **NewV flex<sup>®</sup> metallic** inks offer a very good metallic effect and good rub resistance and adhesion all at the same time.

### Colours available

NewV flex metallics		Liefergebände
NewV flex Silver	66UF9000	4 kg
NewV flex <sup>®</sup> Rich Gold	66UF9002	5 kg
NewV flex <sup>®</sup> Rich Pale Gold	66UF9001	5 kg
NewV flex <sup>®</sup> Pale Gold	66UF9003	5 kg
PANTONE <sup>®</sup>		
NewV flex Gold PANTONE 871	66UF0871	5 kg
NewV flex Gold PANTONE 872	66UF0872	5 kg
NewV flex Gold PANTONE 873	66UF0873	5 kg
NewV flex Gold PANTONE 874	66UF0874	5 kg
NewV flex Gold PANTONE 875	66UF0875	5 kg
NewV flex Gold PANTONE 876	66UF0876	5 kg
NewV flex Silver PANTONE 877	66UF0877	4 kg

### Special properties

- Fast-curing ink series (up to 80 m/min)
- Good flow properties
- Low-odour formulation
- Good adhesion
- ITX-free formula
- VOC- and solvent-free
- Suitable for rubber and photopolymer plates

### Printing stocks

LDPE, HDPE, coextruded PP, PP film, board, paper, polyester film pretreated before printing, PVdC-coated and PVC films, PA/PE film, thermal paper.

Owing to the large number of non-absorbent substrates and plastics available and the differences in quality between them, we are not able to give any guarantees with regard to the print quality or adhesion properties of **NewV flex<sup>®</sup> metallic** inks. However, experience gained in the field so far has shown that perfectly acceptable results can be obtained on overprint-coated plastic substrates for self-adhesive labels.



We recommend you test the suitability of the substrate prior to every commercial production run.

We recommend corona pretreatment whenever working with non- and only slightly absorbent substrates. This measure can also significantly improve adhesion on heavily coated papers. Maximum adhesion is only reached after approx. 24 hours.

\* Non-absorbent substrates must have a surface tension of at least 40 mN/m in order to ensure optimum ink adhesion. In view of the large number of substrate suppliers and different substrates and substrate grades available, we recommend you carry out an adhesion test prior to beginning the print run.

## Range of applications

Despite being designed for flexographic printing on paper and board, in our experience, the **NewV flex<sup>®</sup> metallic** inks can also be put to use in conjunction with overprint-coated plastics such as polyethylene, polypropylene and polyester.

Choosing the right substrate is extremely important with regard to the print quality obtainable when working with **NewV flex<sup>®</sup> metallic** inks. This relates not only to the optical characteristics, such as brilliance and gloss, but also to printing characteristics such as full curing and adhesion.

Heavily absorbent substrates and substrates with irregular surfaces result in poor pigment orientation when printed on and consequently to reduced brilliance. In some cases, preprinting the substrate with a suitable primer can improve its surface properties.

The NewV flex<sup>®</sup> metallic inks can be overprinted inline with a suitable UV lacquer, but if you do this, you must re-radiate the inks again in order to ensure the desired metallic effect is obtained. Whatever the case, you can count on the brilliance of the result being reduced.

To produce the maximum possible degree of brilliance, the NewV flex<sup>®</sup> metallic inks are based on leafing gold bronze and aluminium pigments respectively and are therefore not ideally suited to being overprinted. Field experience shows, however, that a large number of different post-finishing processes, such as thermotransfer printing, hot foil stamping and inline and offline overcoating, can be performed without any problem.

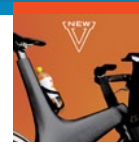
We recommend that you carry out appropriate suitability tests prior to every commercial production run.

## Recommended applications rates

	Vollflächen	Feine Linien
Lines /cm	80-120	140-170
Lines / inch	200-300	360-440
Pick-up volume (cm <sup>3</sup> /m <sup>2</sup> )	12-15	7-10
Angle	60	60

## Printing auxiliaries

<b>NewV sup<sup>®</sup></b> Reducer	60 U 1001	max.	10 %
<b>NewV sup<sup>®</sup></b> Activator	60 U 1003	max.	5 %
<b>NewV sup<sup>®</sup></b> Adhesion Promoter	60 U 1012	max.	10 %
<b>NewV sup<sup>®</sup></b> Defoamer	60 U 1013	max.	0.5 %
<b>NewV sup<sup>®</sup></b> Washup Solution	60 U 1000		



## Application instructions

Like the pigments in all metallic inks, those used in **NewV flex® metallic** inks have a tendency to settle. This can in no way be considered a quality deficiency and can be rectified by stirring the inks thoroughly. This must be done before using the inks on a press and before any adjusting of the inks to a different print viscosity.

## Rub resistance

The printing inks covered by this Technical information sheet are based purely on leafing gold bronze and aluminium pigments respectively, in order to produce as perfect a metallic effect as possible. Although the **NewV flex® metallic** inks have been formulated to provide good curing and adhesion properties, the leafing properties of the gold bronze/aluminium pigments can lead to rub resistance problems depending on the film thickness, the substrate and the printing speed.

We recommend that you carry out appropriate suitability tests prior to every commercial production run and, if necessary, that you apply a suitable UV lacquer for protection.

As a rule, NewV flex® metallic inks are characterised by good rub resistance properties when they are fully cured.

## Thermal papers

**NewV flex® metallic** inks should not be used on thermal papers without being overprinted, because the thermal print head could otherwise become damaged through direct contact with the ink.

In view of the large number of substrate suppliers and different substrates and substrate grades available, we recommend you carry out a test prior to beginning the print run.

## Food and confectionery packaging

The **NewV flex® metallic** inks are not suitable for printing primary food packaging. More information on the subject of food and consumables (semi-luxury foods and tobacco) packaging can be found in the information sheet entitled „Druckfarben für Lebensmittelverpackungen“ (Printing inks for food packaging) published by the German Printing Ink Manufacturers' Association and in TI 5.04.01 entitled „NewV UV inks and lacquers for food packaging“.

## Classification

Safety Data Sheet available on request.

## Shelf life

When stored under the correct conditions (20° C, protected against heat and light): min. 6 months

## How supplied

Gold inks: 5-kg cans

Silver inks: 4-kg cans

Contact addresses for advice and further information can be found under [www.NewV-inks.com](http://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.