

Novaflash® BIO NON-LEAFING Metallic Inks

One-component Metallic Inks with excellent finishing properties and very light colour shades

Spot inks for sheetfed offset

Product features

- x Novaflash® BIO NON-LEAFING Metallic Inks are vegetable oil based, wax-free, one-component sheetfed offset metallic inks for paper and board, based on Non-Leafing aluminium pigments. Novaflash® BIO NON-LEAFING Metallic Inks have very good intermediate adhesion properties and are therefore ideally suited for finishing and over-printing. The metallic effect remains even after varnishing. The Novaflash® BIO NON-LEAFING Metallic series includes the Novaflash® BIO 6 S 170 NON-LEAFING Silver and the Gold shades PANTONE 871-876.
- x Novaflash® BIO NON-LEAFING Metallic Inks are wax-free in formulation and should be sealed with a varnish.
- x Novaflash® BIO NON-LEAFING Metallic Inks are ideally suited for straight-line printing on all multi-colour printing presses. The advantages of the series are high brilliance and a strong metallic effect with very good printability.
- x Novaflash® BIO 6 S 170 NON-LEAFING Silver features a very light silver shade and is therefore ideally suited for mixing Satin Inks.

Advantages of Novaflash® BIO NON-LEAFING Metallic Inks

- x Ready-to-print.
- x Excellent finishing properties preserving the metallic effect.
- x Strong metallic effect.
- x Very light colour shade.
- x Suitable for mixing Satin Inks.
- x Very good printing performance.
- x Ideally suited for gloss coated papers and board.

Novaflash® BIO NON-LEAFING Metallic Inks



		Fastness properties			Printing properties								
		Alcohol	Solvent mixture	Alkali	Half-tone printing	Gloss	Setting	Oxidative drying	Rub resistance	Rapid further processing	Suitability for gloss coated papers/board	Suitability for uncoated papers/board	Suitability for matt coated papers/board
Novaflash® BIO NON-LEAFING Metallic Inks	Product code				4	5	3	5	5	4	7	3	5
Novaflash BIO 6 S 170 NON-LEAFING Silver	VI89-BBN*	+	+	-	1 = Characteristic weakly expressed 7 = Characteristic strongly expressed								
					The assessment of the colour properties was made under standardised printing conditions. In individual cases, under special conditions, as in printing with very high ink densities, the classification of certain properties may be different.								
Novaflash BIO NON-LEAFING PANTONE® 871	VI89-AN1*	+	+	-									
Novaflash BIO NON-LEAFING PANTONE® 872	VI89-AN2*	+	+	-									
Novaflash BIO NON-LEAFING PANTONE® 873	VI89-AN3*	+	+	-									
Novaflash BIO NON-LEAFING PANTONE® 874	VI89-AN4*	+	+	-									
Novaflash BIO NON-LEAFING PANTONE® 875	VI89-AN5*	+	+	-									
Novaflash BIO NON-LEAFING PANTONE® 876	VI89-AN6	+	+	-									
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Colour shade

To achieve the desired finishing characteristics, all metallic colour shades of this series are based on a specific, very light Non-leafing aluminium pigment. Therefore, related shade deviations compared to conventional silver and gold bronze shades are unavoidable and should be considered when designing printed material.

The Novaflash® BIO NON LEAFING gold inks PMS 871-876 achieve the respective PANTONE® colour tone as best as possible because, unlike the classic leafing gold colours, they are not based on zinc/copper, but on an aluminum basis, free of heavy metals.

Density

In comparison to usual silver inks the Novaflash® BIO 6 S 170 NON-LEAFING Silver is printed with a lower density due to its very light aluminium pigments. A density of Dv [Cyan] 0.50 – 0.65 is recommended.

The Novaflash® BIO NON-LEAFING Gold inks, PMS 871-876 are printed with a recommended density of Dv [Yellow] 1.50-1.65.

Due to its light silver shade Novaflash® BIO 6 S 170 NON-LEAFING Silver is suited for the mixing of satin inks.

To achieve best possible results on a less than ideal substrate, an adequate primer can be pre-printed in a sufficient film thickness. This should be checked before commercial production starts.

You are welcome to contact us for further information.

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Substrates

Ideally suited for gloss coated papers and board, suited for matt coated paper and board.

The substrate selection has an important influence on the achievable metallic effect. Depending on the absorption and the surface conditions, the metallic effect can be reduced more or less. Optimal results are normally achieved on coated substrates, however, care must be taken that the coated stock is of good quality.

Some substrates may look attractive, but cause strong penetration of mineral oil and binding agents. The result may be a large amount of unwetted metal pigments on the print surface, which may cause drying and abrasion problems.

Storage and shelf life

Metallic inks should be stored at temperatures of around 25 °C, as high temperatures may cause oxidation which could lead to a decrease in brilliance. The tins should be kept closed whenever possible, as unnecessary opening results in oxidation.

Used ink from the duct must not be refilled into the tin. Mixed fountain solution can react with the aluminium particles of the metallic ink and create gas.

Meeting the recommended storage conditions, Novaflash® BIO NON-LEAFING Metallic Inks will remain stable for a minimum of 12 months from the date of manufacture.

Fountain solution

We recommend using Hydrofast® GS 307, dosed at 2-3% with additional 8% Isopropanol.

Additives

To improve drying, 3-5% drying paste Novaspot® 3107 may be added. However, this should be introduced immediately before commercial production starts, because the longer the resting time the greater the chance of oxidation and the more the brilliance will suffer.

If the substrate requires the tack to be reduced, up to 3% Printing Oil L may be added.

Exceptions

Not for use for food packages without functional barrier.

Special Notes Print Finishing

Within the print finishing, attention must be paid to the fact that standard metallic inks have restricted intermediate adhesion to varnish systems and other components. This is caused by the leafing characteristics of the metallic inks, which means that the metallic particles in combination with the fountain solution travel to the surface of the printed ink film.

In contrast the Novaflash® BIO NON-LEAFING Metallic Inks are based on Non-Leafing aluminium pigments, which do not travel to the surface, thus being protected from additional varnish layers. As a result, Novaflash® BIO NON-LEAFING Metallic Inks feature excellent intermediate adhesion properties with various water-based varnishes, as well as UV varnishes. Concurrently, Novaflash® BIO NON-LEAFING Metallic Inks are ideally suited for offline finishing methods such as sealing and laminating. When compared to standard metallic inks, the intermediate adhesion with laminates is much better, but should still be tested before commercial production.

Important for a successful finishing is the drying status of the ink. Please note, that the time until the ink is completely dried depends upon various factors e.g. substrate and printing conditions (water feed). To evaluate the point at which finishing can be started, measuring the surface tension can be helpful. The surface tension should not be less than 35 mN/m.

In many cases it is recommended to use a primer e.g. Novaset® 4510/40 Offline-Primer from Flint Group. In any case a finishing test should be made before commercial production starts.

When using standard metallic inks, any kind of finishing causes a reduction of the metallic effect. Novaflash® BIO NON-LEAFING Metallic Inks retain the metallic effect as best as possible, even after varnishing.

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Version: 10/04/25 Page 3 of 4

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Resistance Characteristics

In general metallic inks do not have alkali fastness, but they can actually be varnished with a suitable water-based coating. For overprint varnishing, we recommend Novaset® 4216/40 Gloss Coating.

Printability

Environmental influences in the print room are of major importance. The temperature and air humidity can influence the ink balance and thus the printability.

Ideally, systems for the control of air humidity and temperature should be installed in the area around the printing press. The printing press itself should not be exposed to direct sun light.

The pH-value of the fountain solution must be in a neutral range in order not to reduce the brilliance and drying. A pH-value around 5.5 is recommended. An addition of up to 8% Isopropanol has a positive effect on drying and printability.

Metallic inks can be printed wet-on-wet with other inks: the tack of the following inks should be lower, and the ink should not be high-gloss. The metallic ink should be printed in the 1st unit, the following overprint ink should be printed – if possible – in the last printing unit. As overprint Black we recommend Novavit® BIO Black 100.

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