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Novaflash[®] 6 S 103 PASTE

Two-component Silver Paste with very high brilliance and excellent metallic effect especially for label printing

Spot inks for sheetfed offset

Product features

- Novaflash[®] 6 S 103 PASTE is a mineral oil based two-component silver inks for paper and board, based on leafing aluminium pigments.
- Novaflash[®] 6 S 103 PASTE is ideally suited for straight-line printing on all multi-colour printing presses. The advantages of the series are very high brilliance and an excellent metallic effect with very good printability. Novaflash[®] 6 S 103 PASTE is particularly suited for label printing.
- Due to the leafing properties of the aluminium pigments used, Novaflash[®] 6 S 103 PASTE has a low rub resistance. This can be improved by the application of an adequate oil-based varnish or water-based coating.

Advantages of Novaflash[®] 6 S 103 PASTE

- Particularly suited for label printing.
- Excellent metallic effect.
- Very high brilliance.
- Very good printing performance.
- Ideally suited for gloss coated papers and board.



FlintGroup

Novaflash® 6 S 103 PASTE



		Fastness properties			Printing properties								
		Alcohol	Solvent mixture	Alkali	Halftone 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® PASTE	Product code				4	6	4	4	1	3	7	3	5
Novaflash® 6 S 103 PASTE	VI89-B63*	+	+	-	1 = Characteristic weakly expressed 7 = Characteristic strongly expressed								
Silver Varnish	Product code				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.								
Silver Varnish 4893 BIO	VI90-037*	+	+	+									
		Fastness properties according to ISO 2836: + = Resistance provided - = Resistance not provided											

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.

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.

Storage and shelf life

Metallic pastes 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® 6 S 103 PASTE will remain stable for a minimum of 12 months from the date of manufacture. Mixtures are not stable and mixing should therefore take place directly before the printing process starts.

You are welcome to contact us for further information.

The aim of our technical documents is to inform and advise our customers. The information provided herein is correct to the best of Flint Group's knowledge. No liability for any errors, facts or opinions is accepted. Customers must satisfy themselves as to the suitability of this product for their application. No responsibility for any loss as a result of any person placing reliance on any material contained herein will be accepted.

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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	Printing Inks mixed from these PASTE are not to be used for food packages without functional barrier.
Special Notes	A two-component metallic ink achieves the best metallic effect; provided that the mixing takes place directly before the printing process starts - as the inks oxidate with oxygen in the air, which cause a reduction of the metallic effect and the printed ink appears dirtier.
Mixing ratio	Silver inks are mixed in the ratio 1:2 (1 part Silver Paste – 2 parts Silver Varnish), to improve the press behaviour and the intermediate adhesion with varnishes the varnish quantity can be increased up to 1:3. As varnish we recommend Silver Varnish 4893 BIO.
Print finishing	<p>Within the print finishing, attention must be paid to the fact that 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. As mentioned above 15-20 % silver varnish may be added into the silver ink to improve the intermediate adhesion.</p> <p>With finishing methods such as sealing and laminating the same additives in the mentioned dosages can be used. The finishing process must first be coordinated with the finishing company.</p> <p>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.</p> <p>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.</p> <p>Any kind of finishing causes a reduction of the metallic effect.</p>
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® Gloss Coating 4216/40.

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Version: 25/01/21 Page 3 of 4

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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® Black 133 RTW.

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