

Technical Product Information



MetalStar® Super Gloss 07 gold series

Article-No: Product name:

76503..	MetalStar® Super Gloss 07 2001 rich gold
76419..	MetalStar® Super Gloss 07 2002 rich pale gold
76505..	MetalStar® Super Gloss 07 2004 pale gold

Article-No: Product name:

70357..	MetalStar® Super Gloss Pantone® 871 07 4871
70350..	MetalStar® Super Gloss Pantone® 872 07 4872
70351..	MetalStar® Super Gloss Pantone® 873 07 4873
70352..	MetalStar® Super Gloss Pantone® 874 07 4874
70353..	MetalStar® Super Gloss Pantone® 875 07 4875
70354..	MetalStar® Super Gloss Pantone® 876 07 4876

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Product description:

Mineral oil based, wax containing, stable one-component sheet-fed offset inks for paper and carton, based on leafing gold bronze pigments with a particle size between 45-50% smaller than the average standard pigments.

Application:

Offset sheet-fed printing on paper and carton, for example, labels and folding carton.

The selection of the substrate has an enormous impact on the final result of MetalStar® Super Gloss 07 gold inks. This is true not only for optical properties brilliance and hiding power, but also for printing properties such as adhesion and transfer.

Very absorbent or uneven substrates often cause a bad pigment orientation resulting in inferior brilliance. Additionally these substrates can negatively influence transfer properties and adhesion by absorbing essential parts of the binder.

In some cases it might be advantageous to print a suitable primer first, in order to improve surface properties of the substrate.

The MetalStar® Super Gloss 07 inks in Pantone® colours are fully licensed by Pantone, Inc. and comply with colour specification. Changes in the colour specification are possible at any time on request by Pantone, Inc. and are not seen as a lack of quality. Variations in colour shade can be caused by different substrates, lacquers, laminates or printed colour densities.

Product properties:

Rub resistance:

The MetalStar® Super Gloss 07 gold inks are based on leafing gold bronze pigments leading to low to middle rub resistance properties. For better protection an oil-based or water-based lacquer could be applied, however a decrease in brilliance will result.

Intercoat adhesion:

The leafing properties of the gold bronze pigments can cause problems with all kind of finishing. The intercoat adhesion with oil-based and water-based lacquers is less critical, but UV lacquers and laminates should be avoided. Proper testing is recommended before commercial production runs.

Overlacquers or other types of downstream finishing (i.e. laminates) will cause a decrease in the metallic brilliance.

Chemical resistance:

Resistance to	MetalStar® Super Gloss 07 gold series
spirit	+
nitro	+
alkaline	-

The different shades of gold bronze pigments are based on an alloy of copper and zinc (brass) in different ratios. These alloys can react with chemicals or natural materials under a change of colour shade up to a complete decomposition of the metal pigments. As all possible materials can not be listed here, proper testing of all materials involved in the whole production process, although not directly involved in the printing process, is absolutely necessary.

Additional product properties:

	MetalStar® Super Gloss 07 gold series
Pigment content	40 ± 2%
Pigment size (D ₅₀) ¹	2.0 ± 0.3 µm
Tack ²	9.5 – 10.5

¹ data related to pigment

² Prüfbau Inkomat; 32 °C; 200 m/min; 5 min

Recommended printing parameters:

Print Density:

For correct measurements the densitometer has to have a polarisation filter. The reference values given in the list below might change depending on press conditions, substrate, etc.

	Colour density (wet)	Filter
MetalStar® Super Gloss 07 Gold series	1.6 – 1.8	Y

Printing speed:

The maximum printing speed depends on press conditions, substrate and chosen design. Press speeds up to 15.000 sheets per hour are possible.

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Fountain solution:

While MetalStar® inks can be used with most commercially available fountain solutions it is desirable to keep the pH as neutral as possible to avoid drying problems and tarnishing during the run. An ideal pH would be in the range of 5 – 5.5. Avoid high pH levels as this may lead into poor printability. Alcohol in damping units can be beneficial to metallic inks (up to 10%). MetalStar® inks also print perfect with a wide range of alcohol free fountain solutions. For best printing results please contact your press chemical supplier.

Printing plates:

The polymer layers of printing plates are very sensitive to mechanical influences, but differences in the chemical nature of the polymers show significant differences in sensitivity. CTP plates are known to be more sensitive than conventional plates. Metallic inks are by nature abrasive and might destroy the plates within a certain number of impression, depending from the pigment grade and kind of plate used. Independent from the kind of plate used we recommend to bake the plate to prolong its life.

Dilution:

The inks are press ready and should not be diluted. If necessary 1-3% of a mineral oil could be added, but caution must be used since there is a risk that properties like trapping will change significantly.

Additives:

If required, 2-4% of wax paste could be added press side. This might have a negative effect on stability and optical properties and should be tested beforehand.

Cleaning recommendations:

Commercial products can be used. Contamination of the ink with cleaning agents should be avoided in order to maintain stability and optical properties. Please refer to the safety data sheet for safety instructions.

Handling:

MetalStar® inks are stable, one-component, press ready inks - no modifications are needed or recommended. However, blending of MetalStar® inks with other components should only be done per Eckart's recommendations in order to avoid a possible decrease in quality. Used ink should not be refilled in the tin as emulsified fountain solution might react with the metallic pigments causing gelling, oxidation or even gassing. Please contact Eckart's Technical Support for further information.

Storage and transportation:

The ink should be stored below 25°C. High temperatures as well as very low temperatures during storage and transportation should be avoided as those conditions might damage the product (oxidation/gassing or precipitation of binder/additive with low solubility).

It is recommended to keep the tins shut and avoid unnecessary opening. Once opened an anti skinning agent could be used to avoid skinning.

Shelf life: 12 months

Safety data sheet No:

MetalStar® Super Gloss 07 gold series GBOF1

Pantone® is a registered trademark of Pantone, Inc.

For further information or samples, please contact:

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