


Technical Product Information			
METALSTAR SuperGloss 07 gold series			
<b>Article-No:</b> <b>Product name:</b>  076503.. METALSTAR SuperGloss 07 2001 rich gold 076419.. METALSTAR SuperGloss 07 2002 rich pale gold 076505.. METALSTAR SuperGloss 07 2004 pale gold		<b>Article-No:</b> <b>Product name:</b>  070357.. METALSTAR SuperGloss PANTONE® 871 07 4871 070350.. METALSTAR SuperGloss PANTONE® 872 07 4872 070351.. METALSTAR SuperGloss PANTONE® 873 07 4873 070352.. METALSTAR SuperGloss PANTONE® 874 07 4874 070353.. METALSTAR SuperGloss PANTONE® 875 07 4875 070354.. METALSTAR SuperGloss PANTONE® 876 07 4876	
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## Conventional sheetfed offset ink, mineral oil based<sup>1</sup>

### Product description:

METALSTAR SuperGloss 07 gold series are conventional, mineral oil based sheetfed offset inks; Based on gold bronze pigments for printing on paper and carton.

The oxidative drying ink series METALSTAR may release odour-generating by-products during the drying process and is neither low-migration nor low-odour. Therefore, it might contain unevaluated substances with the potential to migrate. Further essential measures for food packaging inks like specific raw material selection, analytic control of raw materials and final products on composition and impurities, GMP production, can not be guaranteed for this ink series METALSTAR. Due to our production processes for these products, we cannot guarantee necessary measures for FCM (Food Contact Materials), such as special raw material selection, control of raw materials and end products regarding composition and impurities or production according to GMP.

A SoC is therefore not available for these products.

When using these products in indirect food contact, the suitability for this application has to be tested before commercial use by the user through suitable analyses.

### Application:

METALSTAR SuperGloss 07 gold series are suitable for offset-sheetfed printing on paper and carton, e. g. labels and folding carton.

As with all metallic inks the substrate has an influence on the result. This is true not only for optical properties as brilliance and hiding power, but also for printing properties such as adhesion and transfer.

Very absorbent or uneven substrates often affecting:

- The pigment orientation and consequently the brilliant effect.
- Transfer properties and adhesion, as essential parts of the binder might penetrate.

In some cases, the use of primers to improve the substrate surface is advantageous.

The METALSTAR PANTONE® SuperGloss 07 series is fully licensed by Pantone, Inc. and comply with colour specification. Variations in colour shade can be caused by different substrates, lacquers, laminates or printed colour densities.

### Product properties:

#### Rub resistance:

The METALSTAR SuperGloss 07 sheet fed inks are based on leafing gold bronze pigments and provide good brilliance. For applications with high demands on rub resistance an OPV (oil-

based or water-based overprint varnish) is necessary. But this will reduce the brilliance.

### Intercoat adhesion and lamination properties:

The leafing properties of the aluminium pigments can cause problems with all kind of finishing. The intercoat adhesion with oil-based and water-based lacquers is good. UV lacquers and laminates are not ideal.

Individual tests are necessary prior to commercial use.

### Chemical resistance:

Resistance to	METALSTAR SuperGloss 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 and might change color shade up to completely decompose the metal pigments. Carefully testing of all materials involved in the whole production process, although not directly involved in the printing process, is absolutely necessary before commercial print runs.

### Additional product properties:

METALSTAR SuperGloss	07 gold series
Pigment content	appr. 40 %
Pigment size (D <sub>50</sub> )	appr. 2.0 µm

For specifications of our products please refer to the technical data sheet.

### Recommended printing parameters:

#### Print Density:


Measurements need to be taken with a densitometer including polarisation filter. The given guiding values might change depending on press conditions, substrate, etc.

METALSTAR SuperGloss	Colour density (wet)	Filter
07 Gold series	1.6 – 1.8	Y

#### Printing speed:

The maximum printing speed depends on press conditions, substrate and chosen design. Press speeds over 15.000 sheets per hour have been successfully realized.

<sup>1</sup> EuPIA Customer Information Note regarding the use of sheetfed offset inks/varnishes (setting and/or oxidative drying, or UV/EB curing) and water-based coatings for the manufacture of food packaging made from paper and board

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#### Fountain solution:

All METALSTAR inks can be used with most commercially available fountain solutions. The pH should be kept as neutral as possible to avoid drying problems and tarnishing during print run. Ideal would be pH: 5 – 5.5.

Avoid high pH levels as this might influence printability in a negative way.

Alcohol in damping units can be beneficial to metallic inks (max. 10%). METALSTAR inks print perfect with a wide range of alcohol-free fountain solutions. For best printing results, please contact your press chemical supplier.

#### Printing plates:

Polymer layers of printing plates are sensitive to mechanical influences. Differences in the chemical nature of the polymers show significant variances in sensitivity, e. g CTP plates are known to be more sensitive compared to usual plates.

All metallic inks are abrasive by nature and might reduce the plate life circle, depending on pigment grade, the kind of plate and the number of impressions.

We recommend baking the plate to prolong its life.

#### Dilution:

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

#### Additives:

Using additives is not recommended; if necessary, 2 - 4% of wax paste could be added press side. This might have a negative effect on stability and optical properties.

#### Cleaning recommendations:

METALSTAR inks can be easily cleaned by commercial available products. In any case contamination of the ink with cleaning agents must be avoided in order to maintain stability and optical properties.

Please refer to the safety data sheet for safety instructions.

#### Handling:

METALSTAR SuperGloss inks are stable, one-component, press ready inks with good metallic effects. However, blending with other components only be done on ECKART's recommendations in order to avoid a possible decrease in quality.

#### Storage and transportation:

METALSTAR SuperGloss inks 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).


Keep the tins tightly shut. Once opened an anti-skinning agent could be used to avoid skinning. ECKART cannot guarantee shelf life stability for used products. Often enough used inks are printed again, we recommend optical tests prior to commercial use.

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.

#### Shelf life:

12 months

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