


Technical Product Information			
METALSTAR 07 gold series			
Article-No:	Product name:	Article-No:	Product name:
076399...	METALSTAR 07 0001 rich gold	076460...	METALSTAR PANTONE® 871 07 2871
076398...	METALSTAR 07 0002 rich pale gold	076461...	METALSTAR PANTONE® 872 07 2872
076418...	METALSTAR 07 0004 pale gold	076462...	METALSTAR PANTONE® 873 07 2873
		076463...	METALSTAR PANTONE® 874 07 2874
		076465...	METALSTAR PANTONE® 876 07 2876

REVISION: 4	EDITION: MARCH 2018	IDENT-NO: 00020.E	PAGE 1 OF 2
-------------	---------------------	-------------------	-------------

Conventional sheetfed offset ink, mineral oil based¹

Product description:

METALSTAR 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 07 gold 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 07 gold. **Therefore ECKART does not generally recommend this ink series for the production of packaging for food, beverages and tobacco, without the customer proving suitability of this inks series for the specific application via a migration test or other measures (e.g. use of functional barriers in the packaging design).**

Application:

METALSTAR 07 gold series is 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 final 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® 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:

METALSTAR 07 gold is based on leafing pigments and provides good brilliance. For applications with high demands on rub resistance an OPV (oil-based or water-based over print varnish) is necessary. But it will reduce the brilliance.

Intercoat adhesion and lamination properties:

The leafing properties of the metallic pigments can cause problems with all kind of finishing. The intercoat adhesion with oil-based and water-based lacquers is most times good, tests are necessary. UV lacquers and laminates should be avoided.

For lamination the METALSTAR SuperEco 08 gold inks are recommended (low VOC series).

Individual tests are necessary prior to commercial use.

Chemical resistance:

Resistance to	METALSTAR 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 07 gold series
Pigment content	Approx. 45 %
Pigment size (D₅₀)	approx. 3.0 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.

	Colour density (wet)	Filter
METALSTAR 07 Gold series	1.4 – 1.6	Y

Printing speed:

The maximum printing speed depends on press conditions, substrate and chosen design. Maximum press speed is between 8.000 – 12.000 sheets per hour. Tests are necessary to find out the maximum speed. For higher press speeds we recommend the METALSTAR SuperGloss 07 series.

¹ 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

Technical Product Information



METALSTAR 07 gold series

Article-No:	Product name:
076399...	METALSTAR 07 0001 rich gold
076398...	METALSTAR 07 0002 rich pale gold
076418...	METALSTAR 07 0004 pale gold

Article-No:	Product name:
076460...	METALSTAR PANTONE® 871 07 2871
076461...	METALSTAR PANTONE® 872 07 2872
076462...	METALSTAR PANTONE® 873 07 2873
076463...	METALSTAR PANTONE® 874 07 2874
076465...	METALSTAR PANTONE® 876 07 2876

REVISION: 4

EDITION: MARCH 2018

IDENT-NO: 00020.E

PAGE 2 OF 2

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:

To improve rub resistance 2-4% 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:

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:

The METALSTAR 07 gold are stable one-component, press-ready inks with good metallic effects. However, blending of METALSTAR inks with other components should only be done on ECKART's recommendations in order to avoid a possible decrease in quality.

Used ink should not be refilled into the tin as emulsified fountain solution might react with the metallic pigments causing gelling, oxidation or even gassing.

Please refer to the Safety Data sheet of METALSTAR 07 gold for further handling guidelines.

Storage and transportation:

All METALSTAR inks should be stored at temperatures below 25°C. High temperatures as well as very low temperatures should be avoided as these conditions could damage the product (oxidation/ gassing or flocculation of binder/additives with low solubility).

Keep the drums tightly shut and avoid unnecessary opening. Once opened – an anti-skinning agent could be used to avoid skinning.

Shelf life: 12 months

PANTONE® is a registered trademark of Pantone, Inc.

For further information or samples, please contact:

ECKART GmbH
Güntersthal 4
91235 Hartenstein
Germany

mail: Info.eckart@altana.com

www.eckart.net

The data on this technical information sheet correspond with the current status of our knowledge and experience. The liability for the application and processing of our products lies with the buyer, and he is also responsible for observing any third party rights. We reserve the right to alter any product data as a result of technical progress or further developments in the manufacturing process.

Technical Product Information**METALSTAR 07 gold series**

Article-No:	Product name:
076399...	METALSTAR 07 0001 rich gold
076398...	METALSTAR 07 0002 rich pale gold
076418...	METALSTAR 07 0004 pale gold

Article-No:	Product name:
076460...	METALSTAR PANTONE® 871 07 2871
076461...	METALSTAR PANTONE® 872 07 2872
076462...	METALSTAR PANTONE® 873 07 2873
076463...	METALSTAR PANTONE® 874 07 2874
076465...	METALSTAR PANTONE® 876 07 2876

REVISION: 4

EDITION: MARCH 2018

IDENT-NO: 00020.E

PAGE 3 OF 2