


Technical Product Information			
MetalStar® Super Gloss 07 silver series			
Article-No:	Product name:	Article-No:	Product name:
50091..	MetalStar Super Gloss 07 2007 silver	50393..	MetalStar Super Gloss Pantone® 877 07 4877
REVISION: 4	EDITION: APRIL 2012	IDENT-NO: 00023.1	PAGE 1 OF 2

## Conventional sheetfed offset ink, mineral oil based<sup>1</sup>

### Product description:

Mineral oil based, wax containing, stable one-component offset inks for paper and carton, based on leafing aluminium pigments.

The oxidative drying ink series MetalStar Super Gloss 07 silver may release odour-generating by-products during the drying process and is neither low-migration nor low-odour. **Oxidative drying standard printing inks like MetalStar Supergloss 07 silver are generally not recommended by Eckart for the production of packaging for food and semi-luxury goods.** These inks can only be used for this purpose if any transfer of substances from the printed ink film to the packed product (by migration or set-off) as well as a deterioration of the organoleptic properties of the packed product is excluded by suitable packaging design, by appropriate processing conditions and the use of a primary packaging material with sufficient barrier properties.

### 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 silver 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 on 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 Pantone® 877 07 4877 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 Super Gloss 07 silver inks are based on leafing aluminium 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 aluminium 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 silver series
spirit	+
nitro	+
alkaline	-

### Additional product properties:

MetalStar Super Gloss	07 2007	07 4877
Pigment content	16 ± 1%	16 ± 1%
Pigment size (D <sub>50</sub> ) <sup>1</sup>	4.8 ± 0.4	4.8 ± 0.5
Tack <sup>2</sup>	7,5 – 8,5	7,5 – 8,5

<sup>1</sup> data related to pigment

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

### Recommended printing parameters:

#### Printing speed:

The maximum printing speed depends on press conditions, substrate and chosen design. The MetalStar Super Gloss 07 silver inks are based on the finest aluminium pigments available with best transfer properties. Press speeds over 15.000 sheets per hour have been successfully realized.

#### 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.

MetalStar Super Gloss	Colour density (wet)	Filter
07 2007 silver	1.0 – 1.1	C
Pantone® 877 07 4877	1.0 – 1.1	C


#### 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.

<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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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 2-5% 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 2007 silver ALOF1

MetalStar Super Gloss Pantone® 877 07 4877 ALOF1

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