


<b>Technical Product Information</b>	
<b>TOPSTAR 06 non-leafing series</b>	
<b>Article-No:</b> 050996.. 050997..	<b>Product name:</b> TOPSTAR 06 2006 gold TOPSTAR 06 2007 silver

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

### Product description:

TOPSTAR 06 series are mineral oil based, wax free, stable one-component sheet-fed offset inks for paper and carton, based on non-leafing METALURE® pigments.

The oxidative drying ink series TOPSTAR 06 may release odour-generating by-products during the drying process and is neither low-migration nor low-odour. 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:

TOPSTAR 06 series are suitable for offset-sheetfed printing. The inks are based on non-leafing pigments.

Ideal suitable for printing on paper and carton (e. g. labels, folding carton), especially for print jobs with high demands on intercoat adhesion.

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.

### Product properties:

#### Rub resistance:

The TOPSTAR 06 non-leafing inks are formulated wax free and should be varnished or laminated for protection, despite the fact that these inks are based on non-leafing Metalure pigments.

#### Intercoat adhesion and lamination properties:

As a result of the non-leafing characteristics the intercoat properties of the inks is good compared to conventional metallic inks. The inks can be overvarnished in-line to improve the rub resistance.

The intercoat adhesion to oil-based and water-based OPV is good. The use of UV lacquers and laminating is possible.

Every surface finishing (lacquers, laminates, ...) will decrease the metallic brilliance.

In each respective case, individual tests are necessary because of the multiple factors influencing the final result.

#### Chemical resistance:

#### Additional product properties:

	Resistance to			CO dryer
	spirit	nitro	alkaline	
TOPSTAR 06 2006 gold	+	+	-	no
TOPSTAR 06 2007 silver	+	+	-	no

TOPSTAR	06 non-leafing series
<b>Pigment content</b>	appr. 6.0 %
<b>Pigment size (D<sub>50</sub>)</b>	appr. 12 µm

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

### Recommended printing parameters:

#### Printing speed:

The maximum printing speed depends on press conditions, substrate and chosen design. Recommended press speed is between 8.000 – 12.000 sheets per hour.

#### 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
TOPSTAR 06 2006 gold	1,5 – 1,6	Y
TOPSTAR 06 2007 silver	0,9 – 1,0	C

#### Fountain solution:


All TOPSTAR 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:

<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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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:**

TOPSTAR 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:**

TOPSTAR 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 TOPSTAR 06 are stable one-component, press-ready inks with good metallic effects. However, blending of TOPSTAR 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 TOPSTAR 06 for further handling guidelines.

#### **Storage and transportation:**

All TOPSTAR 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

For further information or samples, please contact:

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