


Technical Product Information			
TOPSTAR 06 leafing silver			
Article-No: 021874..		Product name: TOPSTAR 06 3000 brilliant silver	
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Conventional sheetfed offset ink, mineral oil based ¹

Product description:

TOPSTAR 06 3000 brilliant silver is a cobalt free, mineral oil based, wax free, stable one-component sheet-fed offset ink for paper and carton, based on leafing METALURE® pigments.

The oxidative drying ink TOPSTAR 06 3000 brilliant 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 TOPSTAR 06 3000 brilliant silver are generally not recommended by ECKART to produce packaging for food. This ink 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. Due to our production processes for this product, 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 this product.

When using this product 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 3000 is suitable for offset-sheetfed printing on paper and carton (e. g. labels, 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.

Product properties:

Rub resistance:

TOPSTAR 06 3000 is based on leafing pigments and provides very high brilliance effects. 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:

The leafing METALURE pigments in the TOPSTAR 06 leafing silver inks cause poor intercoat adhesion properties. 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.

Additional product properties:

TOPSTAR	06 3000 brilliant silver
Pigment content	appr. 5.4 %
Pigment size (D ₅₀)	appr. 10 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. Press speeds up to 15.000 sheets per hour are possible.

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.

TOPSTAR	Colour density (wet)	Filter
06 3000 brilliant silver	1.0 – 1.1	C

Fountain solution:

While TOPSTAR 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%). TOPSTAR 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 impressions, depending from the pigment grade and kind of plate used.


Independent from the kind of plate used we recommend baking 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 to the TOPSTAR 06 3000 brilliant silver, but caution must be used

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

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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:

TOPSTAR inks are stable, one-component, press ready inks - no modifications are needed or recommended. However, blending of TOPSTAR 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:

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 precipitation of binder/additive with low solubility).

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

ECKART cannot guarantee the shelf life of printing ink which has been previously used or modified, nor for ink which has been stored out with the conditions above.


Shelf life: 12 months

For further information or samples, please contact:

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