


Technical Product Information			
ROTOSTAR HE-Series			
Article-No: 072745..		Product Name: HE 81-41203 Silver	
REVISION: 5	EDITION: MAY 2014	IDENT-No.: 00258.E	PAGE: 1 OF 2

Product description:

ROTOSTAR HE 81-41203 is a solvent-based gravure ink based on silver dollar pigments for non-absorbent substrates, e.g. films.

Brilliant effects (surface & reverse printed) are possible utilizing ROTOSTAR HE 81-41203. The ink provides additionally very good hiding power.

The ink series ROTOSTAR HE is solvent based, but neither low-migration nor low-odour. 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:

ROTOSTAR HE 81-41203 is a solvent based gravure ink. Ideal suitable for printing on non-absorbent substrates, e. g. self-adhesive labels and flexible packaging.

ROTOSTAR HE 81-41203 is developed for reverse printing on transparent films and for surface printing on transparent and opaque films.

As with all metallic inks the substrate has an influence on the final result. Very absorbent or uneven substrates often cause poor pigment orientation resulting in inferior brilliance. This is true not only for optical properties as brilliance and hiding power, but also for printing properties such as adhesion and transfer. In some cases, the use of primers to improve the substrate surface is advantageous.

Product properties:

Rub resistance and lamination properties:

ROTOSTAR HE 81-41203 is based on non-leafing pigments. The split proof and the lamination properties are excellent as long as the adhesion to the substrate is given.

The rub resistance is very good on almost all substrates. Over-lacquering is therefore neither necessary nor recommended as this would reduce the metallic effect.

Adhesion:

ROTOSTAR HE 81-41203 is recommended for OPP, pre-treated PET und PE. Pre-treated films (preferably in-line corona treated) give usually excellent adhesion.

Due to the large variety of films individual tests before any commercial use is necessary.

Adhesion on critical substrates can be improved by adding *ULTRASTAR FAP-90 adhesion promoter*.

Additional product properties:

ROTOSTAR	HE 81-41203 Silver
Pigment content	ca. 7.0 %
Pigment size (D₅₀)	ca. 10.0 µm
Solid content	ca. 12.0 %
Binder	Polyvinylbutyral (PVB)
Solvents	Alcohol & Ester & Methoxy propanol

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

The ROTOSTAR inks are delivered with a viscosity that allows the user to make individual adjustments. (e.g. direct tinting with process colours, adjusting the drying and adjusting the printing viscosity).

Recommended printing parameters:

Cylinder configuration:

Both etched and engraved cylinders are suitable (depending on the design).

The following parameters have shown to be useful:

Reverse print on transparent film:

Line count: 70 lines/cm (181 lines/inch)
Cell diameter: 165 µm

For more coverage cylinders with 60 lines/cm (150 lines/inch) and suitable cell depth are recommended. In order to apply less ink use cylinders with 80 – 100 lines/cm (200 – 250 lines/inch).

Surface print on film:

Line count: 100 lines/cm (250 lines/inch)
Cell diameter: 117 µm

For higher film weights or hiding power, cylinders with 80 – 90 lines and appropriate cell depth are recommended. However, the metallic effect could be reduced by printing too high film weights.

Printing speed:


The maximum printing speed depends on individual press conditions, substrate and chosen cell volume.

Normally the effect improves with increasing printing speed. The ink is suitable for highest printing speeds.

Printing viscosity: 13 – 15 s (DIN 4-cup)
19 – 21 s (Zahn 2-cup)

The ideal printing viscosity also depends on cylinder configuration and may vary from the given data.

Solvent might evaporate during the printing, which would lead to an increase of viscosity and this impact the print quality in a negative way. Please check viscosity regularly and adjust, if necessary, with solvent.

Technical Product Information		
ROTOSTAR HE-Series		
Article-No: 072745..	Product Name: HE 81-41203 Silver	

REVISION: 5	EDITION: MAY 2014	IDENT-No.: 00258.E	PAGE: 2 OF 2
--------------------	--------------------------	---------------------------	---------------------

Dilution:

ROTOSTAR HE 81-41203 should be adjusted to printing viscosity with alcohol (e.g. ethanol or isopropyl alcohol). For slower drying methoxy propanol could be used as a retarder.

The amount of solvent may depend on the chemical nature of the solvent.

Additive:

	Additive	Dosage
Adhesion promoter	ULTRASTAR FAP-90	max. 1%

This additive is designed for individual modification of ink properties and should be added only shortly before printing. A negative effect on optical properties may occur. This should be checked before commercial use.

Cleaning recommendations:

ROTOSTAR HE 81-41203 can be removed from the cylinder with alcohols or alcohol/ester blends at any time.

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:

ROTOSTAR HE products are stable one-component inks with excellent metallic effects and high brilliance. The inks can be printed as delivered or adjusted to print viscosity. However, blending of ROTOSTAR HE inks with other components should only be done on ECKART's recommendations in order to avoid a possible decrease in quality.

Metallic inks tend to settle because of the high specific gravity of the metallic pigments. This is normal and not due to a lack of quality. The inks can be easily stirred up and homogenised again. This should be done before viscosity check. No pigment settling should be left on the bottom of the container.

Please refer to the Safety Data sheet of ROTOSTAR HE for further handling guidelines.

Storage and transportation:

All ROTOSTAR HE products 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).

As the solvents in all ROTOSTAR inks are highly volatile, it is recommended to keep drums tightly shut and avoid unnecessary opening.

ECKART cannot guarantee shelf life stability for used products. Often enough used inks are printed again, we recommend optical tests prior to commercial use.

Additionally, used ink should be stored in a drum with air vent valve as possible contaminations (e. g. water content in solvents) can lead to gassing.

Shelf life: 12 months

For further information or samples, please contact:

ECKART GmbH
Günterstal 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.