


Technical Product Information			
UNIPAK WB TC 25 ink series			
Article-No.: 14054.. 14055..	Product name: UNIPAK Rich Gold TC Ink 2568 UNIPAK Rich Pale Gold TC Ink 2569	Article-No.: 14379..	Product name: UNIPAK Pale Gold TC Ink 2570
REVISION: 2	EDITION: MAY 2013	IDENT-NO: 00316.1	PAGE 1 OF 2

Product description:

UNIPAK WB TC 25 ink series are water borne printing inks for the application in the coater unit of an offset sheet fed press. The stabilised one-component inks are based on leafing bronze pigments.

- Primarily designed for use on coated paper and board substrates.
- Based on highly optimised varnish technology providing excellent print performance and stability.
- Utilises finely classified metallic pigments giving exceptional metallic brilliance.
- Excellent gloss and good colour strength.
- Fully water reducible, can also be press-side modified for specific use
- Easy press clean-up.
- Rapid drying.
- <1% VOC's

The ink series UNIPAK WB TC 25 is water based, but 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 UNIPAK WB TC 25.

Application:

UNIPAK WB TC 25 ink series are water borne printing inks for the application in the coater unit of an offset sheet fed press. Ideal suitable for paper and carton board substrates, e. g. wet glue labels, gift wrap, corrugated board, flexible paper, folding carton, etc.

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. In some cases, the use of primers to improve the substrate surface is advantageous.

Product properties:

Rub resistance and lamination properties:

UNIPAK WB TC 25 series is based on leafing pigments and provides high brilliance as well as an optimised rub resistance. As a result of the strong leafing behaviour, the intercoat adhesion in the case of lamination or overlacquering cannot be taken for granted. Especially in cases with high metallic percentage, intercoat adhesion has to be tested before commercial application.

UNIPAK WB TC 25 series is wax-modified. The rub resistance can be increased through addition of polyethylene waxes. In each respective case, special tests are necessary because of the multiple factors influencing the final result.

Overprintability:

UNIPAK WB TC 25 inks can be overprinted in-line. Due to the leafing properties of the gold bronze pigments used in these inks over printability with other inks has to be checked carefully. A modification of the surface tension of the coloured ink might be necessary to achieve good wetting of the metallic ink.

Adhesion:

Adhesion on coated paper qualities is usually good. The adhesion on film is dependent on the substrate. Final tests need to be taken before any commercial use.

Due to the large variety of substrates, it is recommended to test the suitability of UNIPAK WB TC 25 inks prior to any commercial use.

Additional product properties:

UNIPAK WB TC	Rich Gold 2568 Rich Pale Gold 2569 Pale Gold 2570
Pigment content	38.5 ± 2.0%
Pigment size (D₅₀)¹	6 ± 0.5 µm
Solid content	65 ± 2.0%
pH-Value	7.0 – 9.5
VOC²	< 1%
Supply viscosity³	60 - 80 s
Brilliance	***
Hiding power	**

¹ data related to pigment

² does not contain propylene glycol

³ DIN 4-cup

Recommended printing parameters:

Anilox Configuration:

The higher the cell volume used, the better the achievable metallic effect.

The following parameters have shown to be useful:

	L/cm	L/inch	Volume cm ³ /m ²	Volume BCM/in ²
Solid area & broad lines:	60-100	150-250	8-12	5-8
Fine Lines	80 - 200	200-500	5-8	4-5

Printing speed:


The maximum printing speed is dependent on press conditions, substrate and the chosen cell volume. It therefore has to be adjusted to the given conditions.

With sufficient heating power, press speeds up to 12.000 sheets per hour and more should be possible.

Printing viscosity: 25 – 35 s (DIN 4-cup)

For individual applications a viscosity out of this range might be useful.

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

Technical Product Information		 ECKART Effect Pigments	
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Dilution:

The inks should be diluted to printing viscosity with water after the ink has been pumped into the coater unit system, because residual cleaning water might influence the viscosity. If the drying of the ink is too fast, retarders (e.g. propylene glycol, max. 10%) can be used during viscosity adjustment. Alcohols (especially ethanol and isopropanol) should be avoided because they can cause gelling of the ink.

After printing the pump system should be cleaned with water first before using isopropanol. Before filling the system with ink and adjusting viscosity the ink should be stirred well, but slowly and gentle, to homogenise possibly settled pigment again.

Additives:

	Additives	Dose
Wax	ROTOSTAR aqua AD-001 Wax ROTOSTAR aqua AD-003 Wax	max. 5%
Medium	UNIPAK WB Extender 2091	max. 50%
Defoamer	ROTOSTAR aqua AD-002 Defoamer	max. 1.5%

These additives are 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. Inks modified with defoamer should be disposed after printing as stability cannot be guaranteed anymore.

Cleaning recommendations:

UNIPAK WB TC 25 inks can easily be cleaned with water. If water is not sufficient, commercial cleaners usual in the trade can be used for cleaning of different parts of the printing machine (flexo plate, anilox, doctor blade, ink tray etc.). Also a 50/50 blend of water with alcohols (ethanol, isopropanol, etc.) with addition of wetting aids and alkaline cleaners can be used.

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:

UNIPAK WB TC 25 inks are stable one-component inks with excellent metallic effect and brilliance.

The inks can be printed as delivered or after adjusting viscosity. However, blending of UNIPAK WB TC 25 inks with other components should only be done on ECKART's recommendation in order to avoid a possible decrease in quality.

Metallic inks tend to settle because of the high specific gravity of the pigment. 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 is checked. No pigment settling should be left on the bottom of the container.

Please refer to Material Safety Data Sheets of UNIPAK WB TC 25 series for further information.

Storage and transportation:

All UNIPAK WB inks should be stored at temperatures 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/loss of brilliance or precipitation of binder/additive with low solubility). It is recommended to keep drums tightly shut and avoid unnecessary opening.

Shelf life: 6 months

Important: ECKART strongly recommends disposing of used ink after running on press, as the shelf-life of this material can be greatly reduced due to various factors such as light, heat, contaminants etc.

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.

Safety data sheet No.:

Rich Gold TC ink 2568	0872W50
Rich Pale Gold TC ink 2569	0872W96
Pale Gold TC ink 2570	0872W56

For further information or samples, please contact:

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Business Line Graphic Arts

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