Technical Product Information

UNIPAK WB 22 ink series

ECKART Effect Pigments

Article-No.:	**Product Name:**
025474..	2268 Rich Gold
025494.	2269 Rich Pale Gold

Product description:

UNIPAK WB 22 series are water borne flexo printing inks. The stabilised one-component inks are based on leafing bronze pigments.

- Designed to give excellent results on both coated and uncoated papers and boards
- Based on highly optimised varnish technology providing excellent flexo print performance and stability
- Utilises fine particle size metallic pigments giving good metallic brilliance
- Suitable for printing narrow web and wide web
- Good gloss and high colour strength
- Easy press clean-up
- Rapid drying
- < 1 % VOC's

The ink series UNIPAK WB 22 is water based, but 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:

UNIPAK WB 22 series are water borne flexo printing inks.

Ideal suitable for paper and carton board substrates, e. g. wet glue labels, wall paper, gift wrap, corrugated board, flexible paper, folding carton, etc. For narrow web and wide web applications.

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 22 series is wax-modified. Due to the very high pigment content, it is however advisable to apply a water based overprinting varnish to achieve the required rub resistance.
The rub resistance can be increased through the addition of polyethylene waxes. Careful test must be carried out prior to production runs.

Overprintability:

UNIPAK WB 22 series 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 typical paper and carton qualities is usually good. As a result of the strong leafing behaviour of the gold bronze pigments, intercoat adhesion in the case of lamination or over lacquering cannot be taken for granted. Especially in cases with high metallic percentage intercoat adhesion has to be carefully tested before commercial application.

Due to the large variety of substrates final tests need to be taken before any commercial use.

Additional product properties:

UNIPAK WB	**2268 Rich Gold 2269 Rich Pale Gold**
Pigment content	appr. 38.5 %
Pigment size (D_{50})	appr. 4 µm
Solid content	appr. 65 %
pH-Value	8.5 – 9.5
VOC	< 1%
Brilliance	**
Hiding power	***

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

Recommended printing parameters:

UNIPAK WB 22 series is recommended for printing fine lines and very good coverage in solid areas.

Anilox configuration:

The final choice of the anilox depends on the details of the design. As higher the cell volume as better is the achievable metallic effect.

Substrate	**L/cm**	**L/inch**	**cm^3/m^2**
Uncoated Paper / Board	75 - 140	180 - 350	5 – 18
Coated Paper / Board	up to 250	up to 600	> 4.5

Printing speed:

The maximum printing speed depends on press conditions, substrate and chosen cell volume. With sufficient heating power, printing speeds of 150 m/min 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.

Dilution:

The inks should be diluted to print viscosity with water.
If the ink drying is too fast, retarders (e. g. propylene glycol – max. 10%) could be used for viscosity adjustments.

Additives:

	Additives	Dose
Medium	UNIPAK WB Extender 2091	max. 50%

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:

UNIPAK WB inks can be easily cleaned with water. If water is not sufficient, usual available cleaners can be used. Also a 50/50 blend of water with alcolols (ethanol, isopropanol, etc.) and further add ons (e. g. wetting aids, alkaline cleaners, etc.) 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 refere to the safety data sheet for safety instructions.

Handling:

The UNIPAK WB 22 series are stable one-component inks with excellent metallic effects and high coverage. The inks can be printed as delivered or adjusted to print viscosity. However, blending of UNIPAK WB 22 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 UNIPAK WB 22 series for further handling guidelines.

Storage and transportation:

All UNIPAK WB 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.

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.

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