

<b>Technical Product Information</b>		
<b>UNIPAK WB 22 ink series</b>		
<b>Article-No.:</b> 024077... 024826...	<b>Product name:</b> UNIPAK WB 2287 FLEXO Silver UNIPAK WB 2297 FLEXO Premium Silver	

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### Product description:

UNIPAK WB 22 silver ink series are stable one-component water based flexo inks. The stabilised one-component inks are based on non-leafing aluminium pigment flakes. Unipak WB 2287 flexo silver based on cornflake pigments, Unipak WB 2297 flexo premium silver based on silver dollar pigments.

- Primarily designed for use on both, coated and uncoated paper and board substrates
- Based on highly optimised varnish technology providing excellent flexo print performance and stability
- Utilises finely classified non-leafing metallic pigments providing good metallic brilliance and over-printability
- Suitable for printing both narrow web and wide web
- Good to very good rub resistance
- Easy to clean
- Rapid drying
- < 1% VOC's

The ink series UNIPAK WB 22 is water based, but neither low-migration nor low-odor. 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 silver inks are based on non-leafing pigments and highly suitable for in-line over printing / varnishing. In each respective case, special tests are necessary because of the multiple factors influencing the final result.

#### Adhesion:

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

### Additional product properties:

UNIPAK WB	2287 Flexo Silver	2297 Flexo Premium Silver
<b>Pigment content</b>	appr. 20 %	appr. 17 %
<b>Pigment size (D<sub>50</sub>)</b>	appr. 10 µm	appr. 10 µm
<b>Solid content</b>	appr. 39 %	appr. 36 %
<b>pH-Value</b>	7.5 – 9.5	7.5 – 9.5
<b>VOC</b>	< 1 %	< 1 %
<b>Brilliance</b>	**	****
<b>Hiding power</b>	***	*****

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

### Recommended printing parameters:

#### 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.

	L/cm	L/inch	Volume cm <sup>3</sup> /m <sup>2</sup>	Volume BCM/in <sup>2</sup>
<b>Solid area &amp; broad lines:</b>	60-100	150-250	8-12	5-8
<b>Fine Lines</b>	80 - 200	200-500	5-8	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.

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024826...**Product name:**UNIPAK WB 2287 FLEXO Silver  
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	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 alcohols (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 refer to the safety data sheet for safety instructions.

**Handling:**

The UNIPAK WB 22 inks 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 aqua 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 Material Safety Data Sheet of UNIPAK WB 22 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 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.

For further information or samples, please contact:

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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.

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