

Technical Product Information		
ULTRASHINE UV FPG 8244		
Articel number: 021733...	Product name: ULTRASHINE UV FPG 8244 Silver	

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Product description:

ULTRASHINE UV FPG 8244 is a radical curing, solvent-free, stable one-component UV-Flexo ink for application in the coater unit of an offset sheetfed press, based on METALURE® pigments.

Migration:

- The formulation is specifically developed for food packaging applications;
- All ingredients are listed on Swiss Ordinance 817.023.21 appendix 1 or 6.
- Raw materials are selected with preference for high purity materials.
- White spirit and mineral oil are excluded from the production of pigments.
- GMP compliant production of (minimized risk of cross contamination).

The above fundamentally differentiates ULTRASHINE UV 8244 series from standard UV Tower Coater inks.

Therefore, ECKART recommends this ink series for selected production of packaging for food, beverages and tobacco (indirect food contact). Nevertheless the customer must proof the suitability of this inks series for the specific application via a migration test or other measures (e.g. use of functional barriers in the packaging design). The inks are not recommend for direct food contact

Application:

ULTRASHINE UV FPG 8244 is a UV curing ink for applications in the coater unit of an offset sheetfed press. Suitable for printing on paper and carton like packaging and folding carton.

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

Over lacquering reduces the metallic effect. This influence as well as the cohesion depend very much on the lacquer and should be test prior to any commercial use.

Product properties:

Rub resistance:

Completely cured ULTRASHINE UV FPG 8244 inks provide a good rub resistance on almost all substrates. To meet high demands on rub resistance an overprinting varnish should be applied, ideally in-line with additional curing. However, any finishing reduces the metallic effect.

Adhesion:

A corona treatment is recommend. Also by using highly coated papers, the adhesion can be improve significantly in this way. The maximum adhesion takes effect after around 24 hours.

Intercoat adhesion:

The leafing METALURE® pigments in the ULTRASHINE UV FPG 8244 can cause poor intercoat adhesion properties. Over-lacquers or other types of downstream finishing (i.e. Laminates) will cause a decrease in the metallic brilliance and proper testing is recommend before commercial production runs.

Additional product properties:

ULTRASHINE UV	FPG 8244
Pigment content	approx. 2.0 %
Pigment size (D₅₀)	approx. 10.0 µm
Solvent content	0 %
VOC	0 %

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

Recommended printing parameters:

The coater unit must be equipped with a double blade chamber system with an anilox roller. Recommended are "peristaltic" pumping systems.

Negative: Diaphragm pumps often incorporate a lot of air into the ink, which creates micro foam and a viscosity increase resulting in poor printability.

Anilox configuration:

The final choice of the anilox depends on the details of the design. Effects that are more brilliant are possible with high cell volumes.

The following parameters have shown to be useful:

	L/cm	L/inch	Volume cm ³ /m ²	Volume BCM/in ²
Solid areas & broad lines	80-120	200-300	11-14	7.0-9.0
Fine lines	140-170	360-440	7-10	4.5-6.5

Printing speed:

The maximum printing speed depends on press conditions, substrate and chosen cell volume. With sufficient heating power, press speeds up to 10.000 sheets per hour are possible.

Dilution:

The inks are already adjusted to printing viscosity. It is not recommended to add reactive diluents as a negative impact to optical effect, curing speed and stability of the ink could occur.

Printing viscosity:

ULTRASHINE UV FPG 8244 is supplied with print viscosity.

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Additives:

Not recommended. Any modification might influence the stability or the optical properties of the ink and is taken on own risk.

Cleaning recommendations:

ULTRASHINE UV FPG 8244 can be cleaned by using conventional UV-cleaning agents. Also with esters or ester/alcohol mixtures, the uncured inks can be removed easily from the cylinders.

Please refer to the safety data sheet and the safety guidelines given there.

Handling:

ULTRASHINE UV are stable, brilliant one-component inks that can be printed without modification. Blending 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.

When handling UV inks please refer to the safety data sheet and the safety guidelines given there.

Storage and transportation:

ULTRASHINE UV inks should be stored at temperatures below 25°C. Direct sunlight should also be avoided. High temperatures can lead to gelling. Low temperatures can result in the separation of low soluble binder components. Opened containers should never be handled in the direct sunlight, since this result in a preliminary polymerisation.

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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