Technical Product Information

ROTOSTAR UV FX-41002 Shrink Silver

ECKART

Article-No.:	Product Name:
053145…	ROTOSTAR UV FX 68-41002 Shrink Silver

Product description:

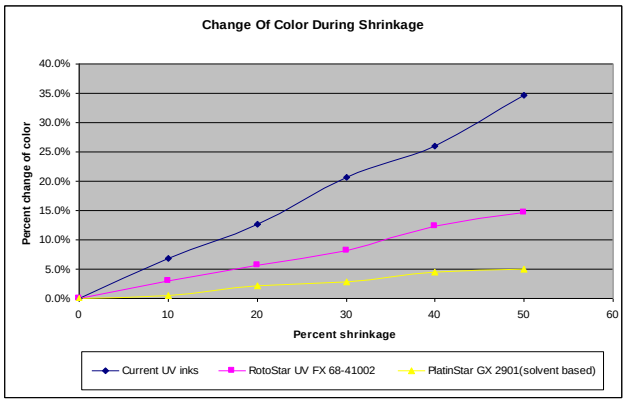
ROTOSTAR UV FX 68-41002 Shrink Silver is a radical curing, solvent-free, stable one-component UV-Flexo ink for shrinkable films based on aluminium pigments.
ROTOSTAR UV FX-68 silver offers a very high metallic effect by minimal ghosting or dulling when shrunk.

The radiation curing (UV light) ink ROTOSTAR UV FX 68-41002 Shrink Silver may release odour-generating by-products during the drying process and is 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 UV FX 68-41002 Shrink Silver is suitable for reverse print (second surface) flexo printing on shrinkable films for shrink sleeve labelling. Over lacquering or backing, e. g. with white is recommended to avoid rubbing off on package surface during shrinkage and to preserve the metallic effect.

The following chart shows the change of colour vs. shrinkage for ROTOSTAR UV FX 68-41002 compared to a standard UV ink & to a solvent based one (PlatinStar GX 2901):
Up to 50 % shrinkage ROTOSTAR UV FX 68-41002 Shrink Silver preserves colour by far better than a standard UV ink.



Product properties:

Curing speed:

ROTOSTAR UV FX 68-41002 Shrink Silver shows good and fast curing on many substrates, with using a UV-lamp capacity of 160 Watt/cm and printing speeds up to 90 m/min.

Rub resistance:

A backing ink (white or clear coating) is recommended for adequate rub and scratch resistance.

Adhesion:

ROTOSTAR UV FX 68-41002 Shrink Silver shows good adhesion on PETG, OPS and PVC. Corona treatment is recommended.
The maximum adhesion takes effect after around 24 hours.
Tests are necessary prior to any commercial use.

Organoleptic Properties (Taint and Odour):

ROTOSTAR UV FX 68-41002 Shrink Silver has been designed for use on secondary food packaging and packaging where a functional barrier exists between the primary packaging and the product.

In all cases the printed material / package should be tested to ensure that the organoleptic properties satisfy the packaging specification.

Migration:

ROTOSTAR UV FX 68-41002 Shrink Silver is not recommended for use on primary food packaging or in any other areas where low migration is an essential requirement.
Please note, that FX 68-41002 Shrink Silver can be used for secondary food packaging and packaging where a functional barrier exists between the primary packaging and the product.
In all cases the printed material / package should be tested to ensure that the migration properties satisfy the packaging specification.

Additional product properties:

ROTOSTAR UV	FX 68-41002 Shrink Silver
Pigment content	approx. 8.0 %
Pigment size (D_{50})	approx. 8 µm
Solvent content	approx.< 1%

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

Recommended printing parameters:

Anilox configuration:

For shrink sleeve applications, low ink film is recommended. The higher the ink film, the more change in colour will occur during shrinkage.
The following configurations have shown to be useful:

	L/cm	L/inch	Volume cm^3/m^2	Volume BCM
Full areas & coarse lines	80-120	200-300	9.3-12.4	6.0-8.0
Fine lines	140-170	360-440	7.7-10.8	5.0-7.0

Printing speed:

At 160 Watt/cm UV-lamp capacity and 9 cm^3/m^2 Anilox volume a printing speed of 90 m/min can be achieved. Dependent on substrate, the printing speed varies.

Printing viscosity:

ROTOSTAR UV FX 68 is supplied with print viscosity.

Dilution:

The inks are already adjusted to printing viscosity. It's not recommended to add reactive diluents as a negative impact on shrinkage as well as on optical appearance, curing speed and stability of the ink could occur.

Cleaning recommendations:

ROTOSTAR UV inks 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:

ROTOSTAR UV inks 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:

ROTOSTAR 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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