



## Gecko® Frontal Uni FOG

Solvent based printing inks for flexible packaging  
Standard surface printing

### Description

A complete range of pigment inks pluri solvent nitrocellulose-based, designed specifically for applications in commercial printing on flexible packaging films anti fog treated. Can be supplied as a series of finished products or as concentrates mono-components and additives for mixing station.

### Applications

Flexible packaging of food, top trays, bags for vegetables or products with high moisture content preserved by the cold cycle, printed on films of polyethylene, chemically treated polyester and polypropylene. Can also be used for shrink applications.

### Print Process

Surface print Flexographic and Rotogravure.

### Properties

Ink adhesion	5	Water resistance	5
Rub resistance	5	Deep freeze resistance	5
Anti-scratch	5	Vegetable oil resistance	5
Heat resistance	160°C - 180°C	Gloss	4

**Rating scale** (1 to 5 based on Gecko product range) 1 = worst value, 5 = best value

**Note:** All properties are a guideline only and must always be tested on the specific application.

Substrates: LDPE, HDPE, Coex OPP, CPP, Chem PET, Shrink-able films (OPP-PE-PET-OPS)

Applicability on acrylic coated PP has to be tested properly in relation to the adhesion promoter already contained in the series.

### Print viscosity

Diluents	Flexographic		Gravure	
	20-25 sec. DIN 4		15-20 sec. DIN 4	
Slow	n-Propanol/n-Propyl Acetate	9:1	n-Propanol/n-Propyl Acetate	3:1
Standard	Ethanol/Ethyl Acetate	9:1	Ethanol/Ethyl Acetate	3:1
Fast	-		Ethanol/Ethyl Acetate	1:1
Retarder	Ethoxy Propanol		Ethoxy Propanol	

## Auxiliaries

**Metallics** A full range of Gecko? gold and silver inks is available.

**Process Inks** A range of slow drying flexo half-tone process colours are available.

## Instructions for the use of printing inks for the production of primary food packaging

For information on the use of printing inks for the manufacture of food packaging please refer to the respective „**Statement of Composition**". This information is provided to allow the calculation of possible levels of migration of evaluated substances in a worst case situation.

Migration tests at hubergroup laboratories with printed samples made from commercially available OPP film (film thickness: 35 µ, printed weight: 6 g/m<sup>2</sup>, with 95 % ethanol as the food simulant) and PE film (film thickness: 50 µ, printed weight: 6 g/m<sup>2</sup>, with 95 % ethanol as the food simulant) showed no migration of substances above legal limits. Based on the results of these migration tests, we expect that the printed inks enable the final printed products to comply with the legal requirements for packaging for all kinds of foodstuff.

The manufacturer of the finished article and the filler have the legal responsibility to prove by appropriate migration testing that it is fit for its intended purpose.

In order to maintain low residual solvents concentration in the printed film, the printer must ensure sufficient drying of the inks, especially when retarders have been added. Residual solvent content must be regularly monitored.

The inks must not be used in the manufacture of packaging where the printed ink layer is intended to come into contact with foodstuff (direct food contact).

There are restrictions for the use of printing inks for applications where temperatures above 120 °C for extended periods of time are applied. For details, please see document "Food Packaging Inks for High Temperature Applications".

## Health & Safety

The material safety data sheets contain all relevant information for the generation of appropriate internal plant instructions. The user is responsible for all local legislation requirements.

## Ink Handling

Please refer to General Guidelines for handling inks for flexible packaging.

## Storage

Store the packaged material in the original packaging at a temperature not below 5°C and not in direct contact with sunlight.

Contact addresses for advice and further information can be found under [www.hubergroup.com](http://www.hubergroup.com)

This Technical information sheet reflects the current state of our knowledge. It is designed to inform and advise. We assume no liability for correctness. Modifications may be made in the interest of technical improvement.