



Gecko® Frontal Uni

Solvent based printing inks for flexible packaging

High end surface printing



Description

A full colour range of highly pigmented nitrocellulose printing inks designed for surface printed applications on flexible films, supplied as finished products or for use as mono component concentrates and additives within an ink dispenser formulation.

Applications

Flexible packaging for food, bottle labels, carrier bags and beverage products printed on polyethylene, chemically treated polyester and polypropylene films. 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	C.O.F. (dynamic)	0.25 - 0.35
Gloss	4	Light fastness (BWS)	3 - 7

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

Note: All technical properties are a guideline only and depend on pigment choice and final application.

For details about exact test methods which are the basis for info about fastness properties given above please refer to the general test method overview.

Substrates: LDPE, HDPE, Coex OPP, CPP, PET chem., shrinkable OPP, PE, PET and OPS

Applicability on acrylic coated PP has to be tested properly prior to print production.

Print viscosity

Diluents	Flexographic 20 - 25 s DIN 4	Gravure 15 - 20 s 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.
Additives	Gecko® Frontal Uni will give adhesion when printing directly on OPP and PE films. A full range of additives is available to modify the characteristics of GFU.
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/m², with 95 % ethanol as the food simulant) and PE film (film thickness: 50 µ, printed weight: 6 g/m², 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.

Contact addresses for advice and further information can be found under www.hubergroup.de

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.