Technical Information

11.W.018 | Solvent-based Liquid Systems | Opaque white inks

hubergroup print solutions

Gecko® 2 K White Flexo

Solvent based white for flexible packaging.

77GW426591 Gecko® 2 K White Flexo

70GH426403 Hardener for 2 K flexo

Description

An Ethanol-based 2-component white designed for a wide range of applications requiring chemical resistance.

Printing process

Flexographic and Gravure printing.

Applications

Surface printing.

Suitable for food and beverage packaging.

Substrates:	PE, BOPP, Coex OPP, PET chem., Corona PET, BOPA.
Minimum surface tension:	PE, BOPP, Coex OPP: 38 mN/m; Corona PET: 52 mN/m; BOPA: 48 mN/m (mN/m = dynes/cm)
Hardener	Hardener for 2 K Flexo (70GH426403).
Curing conditions	This product can be used only in combination with the hardener 70GH426403, with the following ratio: 100 parts of white, 15 parts of hardener (Temp > 10°C). The product becomes tacky-free with the usual timing of the printing process. The below mentioned fastness properties are normally achieved after 7 days at room temperature.

Properties

Dry content 77GW426591	51% ± 2	Dry content Hardener	67% ± 2
Adhesion	■■■■■■■■■■	Water resistance	■■■■■■■■■■
Rub resistance	■■■■■■■■■■	Deep freeze resistance	■■■■■■■■■■
Scratch resistance	■■■■■■■■■■	Solvent resistance	■■■■■■■■■■
Heat-resistance	200° C		

■ = positive rating point on a scale from zero to max. Ten points for highest value / best suitability.

Note: all technical properties are a guideline only and depend on 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.

Printing viscosity

Diluents	**Flexographic Printing** 20 – 25 s DIN 4	%	**Gravure Printing** 13 – 15 s DIN 4	%
Slow	n-Propanol/n-Propyl Acetate	90:10 to 70:30	Ethanol/n-Propyl Acetate	50:50 to 75:25
Standard	Ethanol/Ethyl Acetate	90:10 to 70:30	Ethanol/Ethyl Acetate	50:50 to 30:70
Fast			Ethyl Acetate	100
Retarder	Ethoxy Propanol		Ethoxy Propanol	

Notes

Mixing

Gecko 2K Flexo products are designed to exhibit the highest fastness properties. This highest performance is achieved by proper mixing the two components in the specified mixing ratio where on component is containing a reactive hardener/crosslinker. Following this concept the 2K Flexo products show after mixing an optimum process window in terms of properties like heatseal resistance, chemical resistance as well as adhesion and scratch resistance. This process window is time-depended and should not exceed 4h after mixing the components to ensure highest performance. The viscosity of the 2K system is less affected and typically still in the optimum range even above 8h after mixing and therefore cannot be correlated directly with the performance of the 2K Flexo products. The optimum process window can be influenced negatively by external factors like temperature, moisture and other parameters at the printing side and must be controlled in order to ensure the highest quality.

Cleaning

The cured coating is insoluble in standard solvent used for dilution. It is necessary to prevent the drying of the products during the downtime, when the press stops it is better to leave the product in slow recirculation and at the same time lift the doctor blade.

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

For information on the use of printing inks, varnishes and additives 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 **huber**group laboratories with printed samples made from commercially available OPP film (film thickness: 35 µ. printed wet ink: 6 g/m^2, with 95 % ethanol as the food simulant) and PE film (film thickness: 50 µ, printed wet ink: 6 g/m^2, 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).

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 Conditions

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