



Process: UV flexographic printing
Product: Labels

Gold and Silver Low Migration

SICURA FLEX 39-9P



Up until now, one-component gold and silver printing inks for foodstuffs applications have suffered from variable levels of stability. Siegwerk has now developed UV metallic inks offering **outstanding stability** for the printing of foodstuffs labels. In addition, thanks to the latest raw material technology, the **migration potential has again been significantly reduced**. Moreover, these new one-component metallic inks for UV flexographic printing also have the advantage that they are virtually odourless.

A further benefit of the gold and silver inks in the SICURA FLEX 39-9P series is that they match exceptionally well **PANTONE® shades 871–877**. These inks print extremely well; they cover and bond perfectly and exhibit an attractive metallic sheen. ◆

Process: UV flexographic printing, UV screen printing, UV letterpress
Product: Labels, identification markings

Becomes Visible under UV Light

INNOVA 62-LC

In daylight, Lumicolor varnishes and inks are invisible or appear in a faint pastel shade if desired. **Under UV lighting**, the printed areas **luminesce strongly in blue, yellow or red**. These highly concentrated pastes developed by Siegwerk can be stirred easily into a UV varnish of your choice. The pastes may be treated as polyvalent for all radiation-hardening printing processes, and thus simplify stock-keeping for the printer.

The Lumicolor inks are popular on bottle labels used for alcoholic beverages served in discos under so-called blacklight illumination. Lumicolor print can also be employed for various control functions. For example, a colourless



code, printed on a black surface illuminates clearly under UV light. Care should be taken to use substrates devoid of optical brighteners since they can also fluoresce blue under UV light. ◆

New product numbers from 1 January

All product numbers are changing at Siegwerk with the introduction of the SAP computer system.



Before the end of the year, all Siegwerk customers will receive a summary chart with the existing and new product numbers in the label field. The same table can also be called up on the Internet at: www.siegwerk-group.com > Business Units > Labels > Products > New product numbers.

The series designations remain unaltered. The old product number will continue to be shown on labels until further notice.

Process: UV flexographic printing
Product: Labels

Low Migration UV Overprint Varnish

SICURA FLEX 39-9P-0178

This new varnish is an enhancement of the **low migration** varnish 39-9P-0102 in response to requests from a number of customers for greater reactivity so as to be able to utilize their machine capacities to the fullest. Development in this direction has only been possible through systematic selection of raw materials. The new varnish exhibits **significantly higher reactivity** and thus dries faster, allowing **higher printing speeds**.

Another outstanding property of this low migration varnish is its **minimal odour**. Moreover, despite its relatively high viscosity, the varnish has an attractive sheen. ◆

Field Report: Hot-embossable UV Flexographic Varnish for the «Tricky Cases»

The new, high-gloss UV flexographic printing ink SICURA FLEX 39-0-0300 is perfect for hot film embossing and lends itself well to printing with thermal transfer films.

Siegwerk Product Manager Michael Leipnitz from Backnang/Germany says:



Michael Leipnitz

«Time and time again, overvarnishing of silicone or wax-based UV inks with UV varnishes causes certain problems. In any case, the normally employed, high-gloss UV varnishes are unsuitable for subsequent embossing with hot

films, nor are they suitable for thermal transfer printing.

Thanks to an innovative bonding agent composition and the combination of special additives, Siegwerk has succeeded in developing an embossable UV flexographic

printing varnish for surfaces containing silicone. The new SICURA FLEX 39-0-0300 varnish lays outstandingly well on pre-printed, cured UV waterless ink, e.g. the SICURA PLAST 41WL or 110 N/WA series. The varnish exhibits a fine gloss and gradient, irrespective of the machine speed.

The new UV flexographic printing varnish is already successfully in use with a well-known label printer. In this application, the labels are embossed inline with hot-embossing film and subsequently overprinted at the packer's using the thermal transfer process.»

Michael Leipnitz, Product Manager Labels Application
Siegwerk Backnang/Stuttgart

Technical Glossary

The Trend towards Environmentally Compatible Substrates

A considerable choice of biodegradable, compostable films is already available. Substrates such as Natureflex NVL and NatureWorks PLA will soon take a certain market share.

The problem with conventional plastics is that they take between 100 and 200 years to decompose and can therefore only be disposed of by incineration. Moreover, existing plastics are manufactured exclusively from petroleum which, as we know, is a non-renewable resource.

At the present time, the leading producers of biodegradable and compostable films for the manufacture of self-adhesive labels are Innovia Films in Melbourne and NatureWorks, Minneapolis. Innovia Films is already producing large volumes of packaging films based on cellulose obtained from mechanical wood pulp – marketed under the name Natureflex NVL. The NatureWorks films are called NatureWorks PLA and are based on polyesters produced by the polymerization of lactic acid. The lactic acid used in the process is obtained by the fermentation of sugars obtained from corn or other plants. The polylactide polymer

possesses similar properties to conventional thermoplastics.

The feedstock used for both Natureflex NVL and NatureWorks PLA is a renewable natural product. With regard to compostability, both comply with the international standard EN 13432 and the German standard DIN V 54900-1. The printing inks themselves are negligible in the determination of the compostability because they are usually of a maximum thickness of 5 µm and make up no more than half a percent of the printed material. If the substrate fulfills the composting conditions, the question as to the degradability can be affirmed.

In tests with these films carried out by Siegwerk, the following UV series have exhibited good runnability:

UV-flexographic print (radical polymerization): SICURA FLEX 39-6 and SICURA FLEX 39-3.

UV screen print: SICURA SCREEN 78-3.

UV offset: SICURA PLAST LO and SICURA PLAST 770.

Further information on the substrate manufacturers can be found at www.innoviafilms.com and www.natureworkslc.com.

Process: UV offset wet-on-wet
Product: Labels

Four-Colour Set for UV Offset

SICURA PLAST SP



Some manufacturers print labels using wet-on-wet offset (e.g. on Drent-Gazelle machines). In this case the ink is not dried after each printing unit, but only under the UV radiator after the fourth printing unit.

Siegwerk has specially adapted the SICURA PLAST SP offset scale set for this purpose and both the rheology and the ink system tack are perfectly matched for the wet-on-wet process. The result: no carry-over of the ink to other printing units and no build-up on the rubber blanket. Minimal dot gain, excellent ink-water balance and good runnability are some other benefits to this modified ink series. ♦