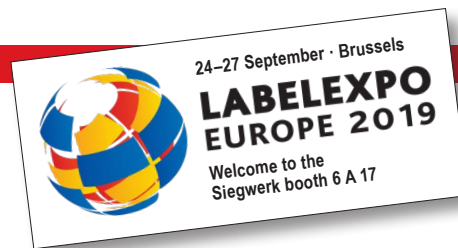


# NARROW WEB

News for label printers · BU Narrow Web · CUSA Edition



## «Welcome to Labelexpo» Many interesting things for you ...

### To produce sleeves successfully in Narrow Web



The most commonly used shrink films are PVC, PET or OPS. These materials shrink at temperatures of about 100° C and are manufactured in such a way that they can only shrink in one direction.

Printing inks are required to behave in dynamic ways in shrink sleeves. Siegwerk's Narrow Web shrink systems are designed not

only to handle intensive ink performance just in shrink but also achieve high level performance in standard applications and other labeling printing. The inks must have a very good scratch resistance, so as not to be damaged when slipped over. They must also be heat-resistant and have to consist exclusively of pigments that do not bleed in the steam shrink tunnel. **A decisive role is played by the full-surface white**, which is applied on the inside of the sleeve – usually printed as the last color in reverse printing. The white must have good sliding properties and high scratch resistance, so that it is not damaged when the sleeves are slipped over.

Siegwerk offers sleeve-suitable inks and special white for all printing processes, both as standard ink and as low-migration ink.

### Special solutions for laminates and tubes

The special UV coatings from Plastic Tubes & Laminates (PTL) can be used on a variety of laminates and tubes made from the substrates PE, PP, ABS, PC and PS. The printer thus has a multitude of possibilities for refining packaging. Especially developed for such applications, Siegwerk is now offering the **SICURA Nutritube ink series** – a low-migration dry offset series that can be used both for preformed (extruded) tubes and for tube laminates (web-fed printing).



### Circular Economy – top priority for sustainability



Being one of the world's leading ink manufacturers, Siegwerk is committed to sustainability. For this reason, Siegwerk strongly engages in one of the most important topics of the packaging industry – Recycling and Circular Economy.

At the booth, Siegwerk will be showing the status of ongoing projects regarding **deinking and recycling** of labels and packaging including sleeved PET bottles. We want to discuss with you what are the consequences of the trend towards recycling for the printing business. What are future demands for the ink? Who needs to collaborate?

Inks for sustainable printing are available. Siegwerk has been awarded the **«Cradle to Cradle Gold Status» for the low-migration SICURA Litho NutriEco UV offset ink series**. There are matching UV flexo varnishes of the SICURA NutriflexEco series to complement the offering.

### Inks for digital printing

In recent years, Siegwerk has invested a lot of time and money in the development of inks for digital printing and inkjet. Siegwerk currently offers excellent UV inkjet solutions for a wide range of applications. For example, the **SICURA NutriJet, an inkjet series for food and pharmaceutical packaging** suitable for inkjet printheads. With **SICURA Jet low-odor**, Siegwerk offers the only non-CMR UV inkjet ink, specially developed for printing labels on household, hygiene and industrial packaging.



All Siegwerk inkjet inks are suitable for self-adhesive labels on cosmetics, wet glue labels on food and beverages, direct-to-pack as well as blister packs and aluminum food lids.



## SICURA Card Pro – a new UV offset series for credit cards

**Process:** UV offset  
**Application:** Credit cards  
**Series:** SICURA Card Pro



It is important that the ink immediately adheres well to the plastic material.

This new series is showing good and stable water/ink balance as well as an excellent flow transfer through the printing unit. **The bond strengths have been improved significantly** and lead to more stability in the production of the credit cards. Of course, the new series is free of the reclassified photoinitiators 369, EDB, EHA and PBZ.



## New UV Relief Varnish LM

**Process:** UV screen printing  
**Application:** Labels  
**Series:** SICURA Nutriscreen

The varnish has an approximate relief height of 250 µm. It dries excellently, remains flexible and shows no yellowing.

This new low migration relief varnish is used primarily to apply raised, tactile warning symbols onto packaging as notices of hazardous contents. Packaging like this must be labelled throughout Europe with a raised symbol for the blind and visually impaired (EN Standard 272 or ISO 11683). Packaging manufacturers prefer to apply the warning symbol as a label that can be screen-printed using clear relief varnish. This relief varnish is **scratch-proof and has a shiny surface.**



## «Migration testing of UV printed food packaging»

– this is the title of the new issue of «explicit», which explains the topic in detail and gives practical recommendations on how to handle the migration check.

The use of low-migration UV systems is significantly growing in the packaging market. To support this trend to print safer food packaging in UV, Siegwerk offers the **most modern low-migration UV ink systems under the brand SICURA Nutri.** Siegwerk also provides training in production security, product validation support and implementation in order to help printers when changing to low-migration systems.

To receive «explicit», please contact [explicit@siegwerk.com](mailto:explicit@siegwerk.com).

## Corona pre-treatment

**Good wettability is one of the prerequisites for the adhesion of inks** to non-absorbent substrates. The wettability is dependent in part on the substrate surface and in part on the surface tension of the ink/ varnish to be printed. As a rule, plastic substrates are well-wetted by a liquid if **the surface tension of the substrate is higher than that of the wetting liquid.** Polymer materials are well-wetted by common organic solvents, but not by acrylates (33 to 39 mN/m), as it can be observed by the formation of droplets on the substrate.

By use of **corona pre-treatment**, the substrate web is fed between two electrodes which create an electromagnetic field. This results in the so-called **corona discharge** which oxidises the substrate surface and creates a higher surface tension. This then amounts to about 40 to 44 mN/m and can be printed also with UV inks.

Surface energy	
Substrate	mN/m
Polyethylenterephthalate (PET)	43.0
Polyvinylchloride (PVC)	39.5
Polystyrene (PS)	33.0
Polyethylene (PE)	31.0
Polytetrafluoroethylene (PTFE)	18.5
Silicone plastics	14.1
Liquid	mN/m
Water	72.7
TMPEOTA (UV acrylate)*	39.6
TMPTA (UV acrylate)*	36.1
DPGDA (UV acrylate)*	32.8
Toluene	28.5
Methanol	22.6
Ethanol	22.1