Siegwerk UV inks for fascinating sleeves

The all-round labelling of containers using sleeves is today a perfected process. It is important that the printing inks are scratch-proof and also flexible so that they withstand the slipping on process without any damage and do not break after shrinking. Excellent UV printing inks for sleeves are SICURA Flex 39-8 and for sleeves suitable for use with foodstuffs SICURA Nutriflex 10 and SICURA Nutriflex LEDTec.

A crucial role in the printing of sleeves is played by the full-surface white, which is generally applied as the last ink of reverse printing. The white has to have very good gliding properties (coefficient at least 0.1 to 0.3), so that it is not damaged during the sliding of the sleeve onto the bottle. The following whites are especially recommended:

- SICURA Flexo Sleeve White E02
  81-010247-5
- SICURA Flexo Sleeve White E10
  81-010304-4
- SICURA Nutriflex Sleeve White E05
  81-010527-0
- SICURA Nutriflex LEDTec
  Sleeve White E01
  81-010506-4

New, flexible black in the SICURA Flex 39-8 series

Process: UV flexo printing
Application: Sleeves
Series: SICURA Flex 39-8
Product number: 81-900935-8.2730

Excellent color intensity and high reactivity. An impressive black for printing beautiful sleeves.

This is an outstanding black, suitable for all non-food sleeve applications. Trouble-free processing, good transfer properties and high flexibility are the advantages of this new ink. This black is processed using conventional mercury vapor lamps.

UV flexo white low migration for sleeves

Process: UV flexo printing
Application: Sleeves
Series: SICURA Nutriflex Sleeve White E05
Product number: 81-010527-0

This newly-developed low migration white shows a perfect laydown, is very opaque, has excellent gliding properties and is highly scratch resistant.

The high reactivity and strong opacity at low viscosity is achieved by combining special raw materials with a highly opaque pigment. At the same time, the new formulation ensures low COF values to allow the sleeves to be applied over the containers without any problem. Shrinkage of up to 70% is possible. The white combines very well with the inks of the Nutriflex 10 and Nutriplast 2 series.
Analytic screening of raw materials in inks for food packaging

Regarding the migration from materials that come into contact with food, the analytical laboratory in Annemasse/France has developed special methods based on ultra-high-pressure liquid chromatography (UPLC) coupled with high-resolution mass spectrometry (HRMS) to perform migration tests. Indeed, both combined systems allow improved separation and reduce the risk of false positive results, hence improve the quality of information, and ensure that the sensitivity is below ppb level.

Today, the demand is coming from the field of the UV curing technology with the target to cover compounds which are mixing acrylate monomers, photoinitiators and breakdowns. And to allow testing in liquid food simulants with again extended sensitivity.

The Siegwerk laboratory is now extending the mass spectra databases to achieve comparative screening with printed samples.

A step forward for low migration UV varnishes: Nutriflex self-curing UV

Siegwerk has successfully launched three new UV varnishes onto the market, which act as self-curing binding agents: a gloss, a matt and a thermal transfer UV varnish.

With the new, self-curing systems, which are based on radiation-sensitive binding agents, an extremely low migration is achieved, even with very critical applications which are printed at high speed.

In addition, these UV overprint varnishes developed by Siegwerk have an extremely low tendency to yellow and are especially suited for narrow web applications.

The first industrial validation tests of the three varnishes were a huge success.

Best before date on containers

It is generally the case that the optimal properties of an ink are guaranteed until the best before date on the container. However, the inks can still be used provided that they do not exhibit physical features such as increased viscosity or are starting to jellify.

To enable them to be stored for longer, it is recommended that UV inks are kept in closed containers, away from light and in cool room temperatures (preferably below 25° C).

Siegwerk has been printing the best before date on the data sheets for a long time. In order to enable better storage (first in – first out), the best before date is now also printed on the packing labels (right next to the production date).