



Technical Information

Issue: October 2015

Product Name

85-600675-4 Nutriflex Primer varnish E46

1. Description / Application

Primer, curing by hybrid mechanism with UV light, for soft and hard aluminium foils.

2. Product Safety

Intended Use

Food packaging, pharma, or hygiene: **YES**

Only for food packaging inks

These inks are only suitable for use on the non-food-contact side of food packaging, provided that they are applied using the relevant Good Manufacturing Practices (a system for ensuring that products are consistently produced and controlled according to quality standards) and according to the guidelines in this Technical Data Sheet.

The printer, converter and the packer/filler each have a responsibility to ensure that the finished - printed - article is fit for the intended purpose(s) and that the ink and coating components do not migrate into the food at levels that exceed legal, regulatory and industry defined requirements.

Please refer to Siegwark's "Statement of Composition" for further regulatory information.

In case of specific applications, please contact your technical application service.

For further information, please refer to Siegwark's Customer Guidance: Printing Inks for Food Packaging ("Know How") on <https://www.siegwerk.com/en/our-responsibility/product-responsibility/customer-communications/food-packaging-safety.html> in particular chapter 5. "The printer's selection of ink" has to be observed.

3. Properties / Substrates

Properties

Applied with the flexo varnishing unit the primer gives radical curing UV-Flexo printing inks an excellent adhesion on aluminium. It is highly heat press resistant and resistant to sterilisation.

Substrates

- Pre-treated oil free aluminium ribbons/foils.
- Oil free hard aluminium ribbons/foils.
- PET and PP filmic material.

Technical evaluation is required in any case.

4. Printing and processing instructions

Application weight

- 2 - 3 g/m²

The hybrid mechanism guarantees that, after exposition to the radiation in the UV lamp, the cross linking process continues up to a comparably high degree of cross linking. However, speed and quality of the curing process are dependent from the radiation dose. You must therefore optimize performance and effect of the dryers and monitor during production their conformity to the present values.

High air humidity (starting from 50% relative humidity) slows down the printing speed and the quality of the cross linking process – particular in combination with low web temperatures. You need therefore to measure and optimize these parameters.



Before printing, ink fountains, varnishing unit, pumps, tubes, (chambered) doctor blades and other elements in contact with ink or varnish must always be cleaned. Slightest contaminations with other inks and varnishes, in particular with radically curing UV-systems, may seriously interfere with the primer.

In case of doubt, consult our technical service.

Guidelines for use

Before the print job is started, new materials must be checked for compatibility with the planned primer /inks combination, even if their suitability on a comparable type of the same substrate group is proved. The test prints, especially on self-adhesive labels, have to be examined after die-punching (in particular at the edges) for adhesion, resistance to scratching and water (resistance to wet scratching and scuffing), resistance to the packaging contents and other job-specific requirements.

Due to possible different material shrinkage and other alterations, these examinations must be repeated after one day.

Levelling/printability, mechanical resistances (e.g. adhesion, folding resistance, punching resistance), resistance to water and the weather, and in particular the resistances to the packaged products, depend largely on the properties of the post-printed inks. The latter is particularly applicable if the ink film on the punching edge is exposed, and hence subject to lateral attack.

Consequently, for every new job in which printing is done on a known material, but with untested ink and printing combinations, the aforementioned tests have to be carried out as well.

Unlike UV systems curing by radical mechanism, the prints are subject to a distinct post-curing phase (dark curing), once passed the UV drier. Hereby the mechanical resistance as well as the water and product resistances will normally improve during the first two days.

Certain papers and cardboards with alkaline coat, some pre-printed inks or varnishes or other surfaces sensible to solvent attack are likely to interfere more or less seriously with the hybrid mechanism. Please verify in advance the suitability of the specific surface on printed material.

Please see also the information on the material safety datasheet.

Cleaning

The product can be removed from tools by using methoxypropanol.
Reactive UV-thinners are not suitable for cleaning.

5. Shelf life

This primer has under normal conditions a shelf life of **at least 12 months**. Within this period the product is usable in conformity with the indications of this data sheet.

Normal conditions mean:

- Storage in firmly closed, not yet tapped containers.
- Temperatures not exceeding 20°C for weeks or 25°C for days.
- Do not expose open containers to direct sunlight or strong light sources.

Because of the differences in materials for printing, processing conditions and test criteria this Technical Information can only be of an advisory nature. Our data reflect the latest state of our knowledge and are based on the characteristics established in the laboratory and on practical experience. Your own tests with the original materials under the respective conditions are indispensable. We disclaim any liability for applications for which this product is not foreseen.