**TECHNISCHE INFORMATION** **TECHNICAL INFORMATION**
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SIEGWERK

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Product name: **SICURA FLEX UV Overprinting Varnish 85-601797-5.1470** (39-6-1004)

Product description: Flexo overprinting varnish, based on SICURA FLEX UV series 39-6, curing by radical mechanism with UV-light, for in-line gloss and protection varnishing, particularly for good **imprintability by thermal transfer** as well as **by hot stamping.**

Printing process: Flexo-varnishing group

Properties:

- **good product resistances**
- **low shrinkage during after-curing**
- **high gloss**
- **chlorine free**

Substrates: Prints with good adhesion and with **good resistances** to water, cosmetics, lotions, shampoos, alcohol, cleaning agents and solvents are normally obtained - **provided** that a **correct selection of the individual preprinted inks** is done and proper application conditions are established - with the following partially or fully printed substrates:

- **In-line Corona treated polyethylenes, with surface tension level of at least 40-45 mN/m**
- **Lacquered/primered polyethylenes**
- **Lacquered/primered polypropylenes**
- **Selected lacquered/primered aluminium (e.g. PVC-lacquered aluminium)**
- **Selected lacquered/primered aluminium-metallized substrates**
- **Selected lacquered/primered polyesters**
- **Coated papers and cardboards**

**Other substrates after technical evaluation.**

Special applications:

- **Thermal papers**:
  - This varnish is **not** suitable for **economic thermal papers** due to the darkening of the thermo-sensitive layer.
  - Due to its limited heat-smear resistance and limited slip properties in thermal printing, this product is normally **not** suitable for **top-coat thermal papers**.

Thermal transfer/Suitability for hot stamping:

This product was conceived for comparably good imprintability by thermal transfer resp. hot stamping.

***To observe:***

- *The good acceptance of the print image depends largely on the surface smoothness (quality of the leveling of the UV varnish), the quality of the ribbon and the type of the printer.*

- *The good acceptance of the hot stamp image is normally better when hot stamping inline than when doing it out of line after aging of the printed inks.*

- *When storing the prints over a longer period of time, some worsening of the good acceptance of the print image in thermal transfer after more than 3 months has to be expected.*

Contact our technical department for more information.

New combinations:

***To observe:***

- *Before the print job is started, **new materials** must be checked for compatibility with the planned overprinting varnish/inks combination, even if their suitability on a comparable type of the same substrate group is proved.*

  *The **test prints** are to be examined **after die-cutting** (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 application-specific requirements.*

  *Due to possible different material shrinkage and other alterations, **these examinations must be repeated after not earlier than one day.***

- *Leveling/printability, mechanical resistances (e.g. adhesion, resistance to buckling and die-cutting), water and weather resistance, and in particular the resistances to the packaging contents are influenced to a relevant degree by the correspondent properties and resistances of the pre-printed inks. The latter is particularly valid, if the ink layer lies open at the cutting edges, and is therefore exposed to lateral stress.*

  *Therefore, before starting a new print job on a known material, but with **novel ink and layout combinations**, the above-mentioned examinations must be done as well.*
  *You will reach optimum performances, if you respect in **printing ink selection** the following **criteria**:*

  - *Preferably UV-letterpress, UV offset, UV screen or UV flexo inks curing by the radical mechanism*

  - *UV inks without or with low content of surface additives (series "for hot foil stamping")*

  - *Best possible adhesion and water resistance on the selected substrate*

  - *Selection of the ink series with the best possible resistance to the packaging contents*

- *Exclusion of specific shades which contain pigments with poor fastnesses to the specified packaging content resp. poor light and weather fastness.*

- *If you intend to produce for packagings which are subsequently to be **filled with odor-sensitive contents**, please make sure that the typical odor of the prints will not affect them.*
  *If you want to print on materials which will later be used as an immediate food wrapper or which will be placed close to food, please contact Siegwerk. Read our Technical Information "UV- and electron-beam curing printing inks and varnishes: Physiological harmlessness and suitability for food packagings" (available on request).*

In case of doubt, please contact in time our technical department.

Shelf life:

This varnish has under normal conditions a shelf life of **at least 9 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℃ for weeks or 25° C for days.

The shelf life can be extended by cool storage below 15℃.

## HSE

### Product Safety

Intended Use
Food Packaging: no

Compliance Management
Only intended for food packaging if the processing conditions rule out the possibility of set-off in the reel or stack and the design of the final printed article ensures reliable functional barrier properties to migration.
The “Customer Guidance: Printing Inks for Food Packaging”, in Appendix 2 “the Selection of the Ink Product” http://www.siegwerk.com/en/customer-segments/sheetfed-uv/service.html has to be observed.