

Technical Datasheet

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Product Name

SICURA 41-WL

1. Description / Application

SICURA 41-WL ink series is a waterless UV offset system, curing by radical mechanism, showing outstanding adhesion properties on a wide range of substrates.
The inks are applied with Toray waterless negative- or positive-plates or Presstec CTP plates.

2. Product Safety

Intended Use

Food packaging, pharma, or hygiene: **NO**

Only acceptable 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. For further information, please refer to **Siegwerk'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

- excellent printability
- low dot gain also at high colour density
- outstanding adhesion properties
- very good fastness-properties

Substrates

Adhesion, resistance to scratching and scuffing, water resistance (wet scratch and wet scuff resistance) and very good resistances to cosmetics, lotions, shampoos, alcohol, cleaning agents and solvents are obtained on standard label materials. However, individual tests under original conditions have to be carried-out before printing.

Special applications

Except for special new paper qualities, the inks of this series are **not suitable for economic thermal papers** due to the darkening of the thermo-sensitive layer.

The inks of this series are **not suitable for thermal transfer and hot foil stamping**. However, tests with original material under industrial conditions have to be made, since the result depends largely on the quality of the used substrate.

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

4. Printing and processing instructions

Guidelines for use

Before the print job is started, new materials must be checked for compatibility with the inks of this series or with the planned ink-/overprinting varnish 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), adhesion and scratch resistance after heat-sealing, resistance of the printed ink to the packaging contents and other application-specific requirements.

Due to the post-curing process, these properties may change during the first 24 hours after printing. Therefore please make a re-check after one day.

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.

PVC and un-primed polyethylene and polypropylene substrates may contain lubricants, which can migrate to the surface e.g. during storage. Such substances may be present even if the measured surface tension is higher than 42 mN/m; they can negatively influence the adhesion, the scratch and water resistance of the printed inks.

Printing

Printing plates: Toray or Presstec plates for waterless inks. Negative plates are recommended.

Curing

Suitable for curing the inks of this series are medium pressure mercury vapour UV emitters with a power of at least 160 W/linear cm. Optimum results can be achieved by using high performance quartz coated aluminium reflectors, which reflect almost the total UV radiation across the whole spectrum.

For more power, two or more units can be connected in series.

Guidelines for use

The printing speed and the quality of crosslinking depend not only on the curing unit but also on the shade, colour strength and opacity. Generally, black, dark blue, white and bronze inks will dry slower than yellow, red or varnishes.

Stir up well each ink or varnish before use. Mainly whites, colours containing white, varnishes, mat varnishes as well as gold and silver inks show sedimentation of essential components.

Do not handle products without having consulted the corresponding safety data sheets. We supply them together with the first shipment.

Cleaning

The inks can be removed from tools by using methoxypropanol. To clean the sensitive waterless plates correctly, please follow the recommendations of the plate supplier or contact our technology department. Reactive UV thinners are not suitable for cleaning.

5. Shelf life

The inks and varnishes of this series have under normal conditions a shelf life of **at least 12 months**. Within this period the products are usable in conformity with the indications of this data sheet.

Exceptions:

70-980169-0, 41-WL Black 9990 = **only 9 months!!**

71-980241-5, 41-WL Intensiv Black 9992 = **only 9 months!!**

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.

6. Product list

Product name	Product code	Light fastness (WS)	Alcohol resistance	Solvent resistance	Alkali resistance
41-WL EURO YELLOW 1210	70-380166-2	5	+	+	+
41-WL EURO RED 3000	70-880160-0	5	+	+	-
41-WL EURO BLUE 5650	70-113298-7	8	+	+	+
41-WL BLACK 9990	70-980169-0	8	+	+	+
41-WL INTENSIV BLACK 9992	71-980241-5	8	+	+	+
41-WL GREENISH YELLOW 0300	71-380212-2	6	+	+	+
41-WL ORANGE PMS 021 C 1608	71-710238-8	4-5	+	+	+
41-WL WARMRED 2050	71-880337-2	5	+	+	+
41-WL RED PMS 032 C 2048	71-880339-8	5	+	+	+
41-WL RHODAMINE RED 4500	71-880334-9	5-6	+	+	+
41-WL PURPLE 5400	71-100824-3	5-6	+	+	+
41-WL VIOLET 5501	71-100823-5	6-7	+	+	+
41-WL REFLEX BLUE 6400	71-113405-6	7	+	+	+
41-WL BLUE PMS 072 C 6413	71-113397-5	7	+	+	+
41-WL GREEN 7900	71-510516-9	8	+	+	+
41-WL TRANSPARENT WHITE 1001	71-004016-3		+	+	+
41-WL OPAQUE WHITE 1020	71-013985-8	7-8	+	+	+

Because of the differences in materials for printing, processing conditions and test criteria this Technical Data Sheet 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 ink series is not foreseen.

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