



CHARACTERISTIC

The LED STERAFLEX inks are especially developed for printing on flexo machines with excellent flow properties, especially developed for curing with LED UV.

PROPERTIES

- 🔊 *Curing with LED UV*
- 🔊 *Excellent printability*
- 🔊 *Fast curing*
- 🔊 *Good gloss, high colour strength*
- 🔊 *Viscosity properties fit for flexo printing*
- 🔊 *Low odour*
- 🔊 *Optimal resistance properties will be obtained 24 hours after printing*
- 🔊 *Formulated without benzophenone*
- 🔊 *Formulated without ITX*

APPLICATION AREA

- ☑ *All flexo label and packaging printing machines equipped with a UV-curing system*
- ☑ *LED-UV: LEDs (light-emitting diodes) are based on the principle of electroluminescence: a tiny semiconductor panel emits light when subjected to an electric current. This light consumes very little energy, the diodes have an extremely long working life and they generate no ozone. Unlike conventional UV lamps with mercury tubes, the LED-UV lamp built into the label printing machine consists of innumerable small LED panels arranged across the entire width in multiple rows. The print path can be routed close to the LED panels since very little direct heat is generated. While a conventional UV lamp requires a warm-up phase lasting a few minutes, the LED-UV lamp has no waiting time and is immediately operational after switch-on. The LED-UV lamp emits only a small range of the conventional spectrum of UV lamps. In particular, the high-energy IR radiation and the hazardous UV-B and UV-C radiation are absent. Due to the extremely narrow wavelength window of the LED-UV lamp (peak at 395nm), conventional UV inks cannot be dried using the new lamp. This makes the new LED STERAFLEX series, developed by Toyo Ink Arets, indispensable for the LED-UV technology.*

UV CURING

LED Steraflex inks are ideally cured with LED UV lamps of 16 to 22 W/cm² with emission spectrum between 365 to 395 nm

(the curing is also influenced by the substrate, the condition of the lamps, the condition and adjustment of the reflectors, the thickness of the ink layer, colour, etc.)

SUITABLE SUBSTRATES (surface tension see 'Recommended treatment levels')

- ☞ All kinds of paper and board
- ☞ Inline Corona treated polyethylene
Preliminary adhesion tests are recommended
- ☞ Selected laquered/primered aluminium foils and lids.

AVAILABLE COLOUR SHADES

- ☞ Process colours
- ☞ Opaque white
- ☞ Mixing colours

REFERENCES LED STERAFLEX INKS

		IWS	Alcohol	Nitro	Alkali
<u>Process colors</u>					
Yellow	EXC55001XY	5	+	+	+
Magenta	EXC55002XY	5	+	+	-
Cyan	EXC55003XY	8	+	+	+
Black	EXC55004XY	8	+	+	+
Yellow	EXC55021XY	6	+	+	+
Magenta	EXC55022XY	7	+	+	+
<u>Mixing colors</u>					
Opaque white	EXC55901XY				
Transparent white	EXC55902XY				
Yellow	EXC55912XY	5	+	+	+
Orange	EXC55920XY	5	+	+	+
Warm red	EXC55930XY	3	+	+	-
Red 032	EXC55932XY	5	+	-	+
Rubine red	EXC55940XY	5	+	+	-
Purple fast	EXC55953XY	6	+	+	+
Violet fast	EXC55961XY	7	+	+	+
Reflex blue fast	EXC55963XY	7	+	+	+
Blue 072 fast	EXC55965XY	7	+	+	+
Proc. blue	EXC55970XY	8	+	+	+
Green	EXC55980XY	8	+	+	+

REMARKS

- ★ *When laminated afterwards, take care to use the correct fast inks, and to do a preliminary adhesion test.*
- ★ *Cleaning: it is not necessary to wash the press immediately after printing. These inks will not cure in the press and are therefore ready to use for the next day's printing. However, the ink may start to cure in the press if sunlight or UV-light from the bulbs / UV-lamp is allowed to shine on the ink.*
- ★ *Shelf life: these inks have a 12-month shelf life guarantee. This guarantee covers 12 months from the date of manufacture (which is mentioned on the label). In order to give this guarantee, certain recommendations must be followed: these inks should be kept on stock at temperatures between 15 – 20°C and they should not be exposed to direct sunlight or heat. If possible, store the ink in a dark room.*
- ★ *Rollers: the following roller material is recommended: EPDM (Ethylene-Propylene-Diene-Monomers). EPDM rollers show excellent performance with UV-inks.*
- ★ *Nitril rubber: nitril rubber rollers show minimal swelling with UV-inks and conventional inks. Solvents such as glycol and acetates do have a tendency to make this rubber swell. Nitril rubber is recommended when using two component metallic inks.*

PACKAGING

- 5 kg plastic pails

ADDITIVES

- | | | |
|--------------------|-------------------------|----------|
| ◆ Wash-up solution | labelling and reg. free | EXC10820 |
| | anilox cleaner | EXC10864 |
| ◆ Photoinitiator | | EXC10708 |
| ◆ Thinner | | EXC10031 |

RECOMMENDED TREATMENT LEVELS (DYNES / CM)

		PE	PP	PVC	PET	PS	PVDC	PU	ABS	PTFE	Silicone
Flexo and	Min.:	38	40	36	42	42	42	38	40	36	40
Gravure	Max.:	50	50	50	54	48	52	50	52	52	50

PRODUCT SAFETY

*This varnish (or these inks) is (are) **NOT** suitable for **FOOD applications** unless a proper risk assessment proves that its use is safe (e.g. if the process rules out the possibility of set-off in the reel or stack AND if the design of the final printed article ensures reliable functional barrier properties to migration). For further information please contact our local sales team or www.toyoink.eu.*