

Series

# UV-PVC LED

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Type: UV LED

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Printing process: screen printing

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Ink type: one-component

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Finish: glossy

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Materials: ABS, Cellulose acetate, Lacquered surfaces, Mylar, Polycarbonate, rigid PVC, SAN, Self-adhesive PVC, treated PETG, treated Polyester, Wood

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Main features:

. The UV-PVC LED series is suitable for applications where the energy required for photoinitiation is supplied by UV-LED lamps

- . Fast polymerization
- . Glossy finish
- . Excellent printability, slightly thixotropic structure  
The ink doesn't drip when the print is stopped.
- . Does not contain NVP (N-vinyl-2-pyrrolidone)
- . Good resistance to alcohol and petrol
- . Excellent adhesion on the above materials
- . Good stability for the prints that must be exposed outside

A preventive pretreatment is recommended when printing PETG.  
The surface tension need to be 44 N/m.

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Certifications: CLP/GHS (EC 1272/2008), Conflict minerals free, EN 71-3, Reach (EC 1907/2006), RoHS

The EN 71:3 Directive is valid for standard shades of one component inks, two component inks, Ink system and Process colors, HD shades and for all not standard shades which do not contain metallic shades, metallic pastes or fluorescent pigments or inks.

In order to clarify any doubt on not standard shades, it is always recommended to provide us a specific request.

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Eco-sustainability (free of): Animal origin ingredients, Aromatic Hydrocarbons, Azo dyes, Bisphenol A (BPA), Cyclohexanone, Formaldehyde, G-B Ester, Latex, Melamine, PAH, Persistent organic pollutants, Phthalates (listed in RoHS directive)

Note: shades in the fluorescent color chart contain formaldehyde.

Note: inks are formulated without aromatics naphthas, potential IPA contaminations are minimal.

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Outdoor resistance (years): 3

Good stability for prints that must be exposed outdoors.

Tests performed in QUV, with a cycle of 600 hours (4 hours of humidity - 8 hours of UVA insolation - at a temperature of 40°C).

The tests performed do not take into account some external factors that are beyond our control:

- . Salt spray
- . Acid rain
- . Basic rains
- . Presence of gases emitted into the environment
- . Print conditions
- . Degradation of the support

In case of mixing with the transparent bases 70 TR or TP, or with the white 160 or 60 BN, the light fastness and atmospheric agents decrease.

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If you want to increase the outdoor solidity, it's recommended to add 5-7% of UV adsorber to the ink.

Drying process: UV

The UV-PVC LED Series ink solidifies (polymerizes) only with UV radiation (photo-initiation).

The total polymerization of the ink takes place largely within a wide range of energy emission. Polymerization also depends on the substrate on which it is printed, the thickness of the ink, the speed of the conveyor belt and the lamps used.

The wavelength (energy) required for photo-initiation goes from 385-395 nm.

The polymerization process through UV energy occurs not immediately, but progressively over time.

The process needs 1-2 days to be complete.

Mechanical and chemical solidity:

Alcohol	
Gasoline	
Surface hardness (Abrasion)	2H

To obtain maximum adhesion it is important to take into consideration the surface tension of the substrate, which must be greater than 38 N/m as the minimum limit. Ideal value: > 40 N/m.

To obtain a certain value of the results of mechanical and chemical solidity, it is advisable to carry out the tests at least 48 hours after printing.

Colours range: EXTRA - M, HD, INK SYSTEM, QUADRICROMIA

170	160 HD	10 GL	11 GS	12 AR	21 RS	22 RC	25 MG	27 VT	32 BL
40 VR	60 BN	65 NR	70 TR	1080	1081	1082	1083	TP	

Please refer to the Ink System ink color charts.

The Ink System are 12 colour shades for mixing of RAL, PMS and HKS colours.

The metallic shades are available only by mixing the relative pastes with the Transparent Base UV-PVC LED 70 TR.

Gold paste 75 10-20%

Gold paste 76 10-20%

Gold paste 77 10-20%

Bronze paste 78 10-20%

Silver paste 79-050 10-15%

The metallic pastes composed with the relative transparent base UV-PVC LED 70 TR, due to their particular composition, can oxidize.

The pot-life of the compounded METALLIC PASTES is about 5-6 working hours.

In the Ink System color chart are present the shades.

1080 yellow, 1081 magenta, 1082 blue, 1083 black, TP paste (CMYK), necessary for making four-color prints.

Auxiliaries and additives:

UV-DIL universal thinner	2,5%	5% max
UV 607 photoinitiator	5%	8% max

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UV/N levelling agent	0,5%	
UV Adsorber	8%	
Antistatic UV	1%	

Do not use the above additives in quantities greater than the recommended value.  
Photo-initiation or non-adhesion problems may occur between the layers of printed ink

Ink removal:  
DACS solvent  
Lavaggio telai solvent  
Aprimaglia Spray

**STORAGE:**

Please keep the cans in a dark place, at temperature of 15-25°C.

If the recommended temperature is higher than the suggested one or the cans are not completely closed, the shelf life and the qualities are drastically reduced.

**CLASSIFICATION:**

Before using this ink, consult the relevant safety data sheets available.

The safety data sheets provided comply with the REACH regulation (EC 1907/2006).

The hazard classification and related labelling are compliant with the CLP / GHS regulation (EC 1272/2008).

**OTHER INFORMATION:**

For more information on SERICOM ITALIA srl products, refer to the website [www.sericom.it](http://www.sericom.it)

**NOTE:**

Our technical consultancy activity, carried out orally, in writing or through tests or experiments, takes place on the basis of our best knowledge.

However, the same must be considered as information without any binding value, also as regards any third party industrial property rights.

This does not exempt the customer from performing his own checks on the products supplied by us in order to estimate the suitability or otherwise of the procedures and for the purposes intended.

The application, use and transformation of the products take place outside our control possibilities and therefore fall under the exclusive responsibility of the customer.