

Series

UV-M

Type: UV (LED + traditional)

Printing process: screen printing

Ink type: one and two-component

Finish: glossy

Materials: ABS, Aluminium, Aminoplastic resins (hard-plast), Carbon, Epoxy resins, Iron, Lacquered surfaces, Metal (in general), Mylar, Nylon 6.6, Phenolic resins (hard-plast), Polyamide, Polycarbonate, Polystyrene, Polyurethane, rigid PVC, SAN, Self-adhesive PVC, Stainless steel, treated PET, treated PETG, treated Polyacetal (POM) (hard-plast), treated Polyester, treated Polyethylene (HD-PE, LD-PE), treated Polypropylene, Triacetate (Trevira), Wood

It is recommended to carry out preliminary tests before printing.

Main features:

- . Does not contain NVP (N-vinyl-2-pyrrolidone)
- . It doesn't contain organic solvents
- . Excellent reactivity
- . Used as a two-component, maximum chemical-physical solidity is obtained
- . Glossy appearance
- . Medium viscosity pseudo-plastic ink
- . Excellent printability

To obtain a good adhesion on glass, it's absolutely necessary to clean the material and clean any residues of graphite, silicone, dust, grease or fingerprints.

In any case, it is advisable to clean the substrate with alcohol or, even better, pre-treat with flaming or, where it is not possible, with the corona system.

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.

Eco-sustainability (free of): Alogens, 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), Volatile organic compounds

Note: shades in the fluorescent color chart contain formaldehyde.

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

Outdoor resistance (years): 1

Not suitable for long outdoor exposure.

The pigments used have a solidity from 6 to 8 DIN.

Drying process: UV

The UV-M Series ink solidifies (polymerizes) only with UV radiation (photoinitiation).

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 250-400 nm (ideal 365 nm) obtainable with a mercury pressure lamp of 80-200 W/cm. At a tape speed of 10 mt/mi.

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

The complete polymerization process at room temperature are 1-2 days after printing.

If the ink is used as a two-component (addition of the relative hardener), the times for complete polymerization are extended up to 4-5 days after printing.

Post heat treatment (passage in the oven at 130°C for 10 minutes) significantly accelerate the polymerization process, helping also adhesion and chemical-physical solidity.

Mechanical and chemical solidity:

Alcohol	good
Flexibility (Elasticity or Bending)	medium
Greases	good
Surface hardness (Abrasion)	excellent
Water	good

Use of hardener increases the solidities mentioned above.

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.

Recommended treatments: flame, corona or plasma.

The adhesion tests can be carried out a few minutes after the passage in the UV oven.

Cause it is a double polymerization ink (photo cross-linking and polymerization with hardener), it is recommended to carry out the final tests at least 36 hours after printing.

If you want to have certain results, it is necessary to wait 4-5 days after printing.

To obtain immediate results, it's recommended to pass the printed object in an oven at 140°C for minimum 10 minutes.

Temperature not only accelerates the polymerization process but also increases adhesion.

The Adhesion Promoter UV G40, in the percentage of 5%, increases adhesion considerably.

Adhesion Promoter UV G40:

- Sensitive to humidity; after use, close the container carefully.
- Avoid contact with alkaline substances (may lose efficiency)
- Store at a temperature of 15-25°C

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-M 70 TR.

Gold paste 75 10-20%

Gold paste 76 10-20%

Gold paste 77 10-20%

Bronze paste 78 10-20%

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Silver paste 79-050 10-15%

The metallic pastes composed with the relative transparent base UV-M 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
XFH-N Green hardener	5%	for outdoor applications. diisocyanate content < 0,1%
XFH hardener	5%	10% max
UV 94 F photoinitiator	2,5%	(fast, surface) 5% max
UV 527 photoinitiator	2,5%	(depth) 5% max
M 2000/S conc. levelling agent	0,5%	
UV G40 adhesion promoter	5%	
Antistatic UV	1%	

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

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.