

Series

# UV-TM

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Type: UV traditional

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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, Membrane keyboards, Polycarbonate, Polystyrene, rigid PVC, SAN, Self-adhesive PVC, Synthetic leather, treated Polyester

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Main features:

- . Does not contain NVP (N-vinyl-2-pyrrolidone)
- . It does not contain organic solvents
- . Medium reactivity
- . Glossy finish
- . Pseudo-plastic ink of medium viscosity-ready to use
- . Good flexibility
- . Good abrasion resistance
- . Excellent printability
- . Good solidity for products exposed outside (indirect exposure)

The UV-TM Series can be printed with silk-screen printing plates with fabric from 120 to 180 mesh (ideal 150.31).

Please remember the larger is the mesh opening, the greater is the thickness of deposited ink, consequently, the greater is the energy (UV radiation) which must be produced to obtain the maximum polymerization.

Due to the versatility of use of this ink, and the possible differences in the quality of the supports used, pre-tests are suggested.

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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: transparent shades in the display color chart contain cyclohexanone.

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): 2

Good stability for prints that must be exposed outdoors (3-4 years).

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
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Series

# UV-TM

. Degradation of the support

The pigments used have a solidity of 7 DIN.

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.

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-TM 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 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.

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	good
Flexibility (Elasticity or Bending)	medium
Gasoline	good
Plasticizers	good
Surface hardness (Abrasion)	H

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

If you want to obtain a certain data of the results of mechanical and chemical solidity, you must carry out the tests at least 48 hours after printing.

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

170	170 L	170 T	160 HD	165 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	80	81	82	83	84	85	81-00	82-00

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-TM 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-TM 70 TR, due to their particular composition, can oxidize.

Series

# UV-TM

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 94 F photoinitiator	2,5%	(reactivity) 5% max
UV 292 photoinitiator	2,5%	(for whites) 5% max
UV 406 photoinitiator	2,5%	(for colors) 5% max
UV/N levelling agent	0,5%	
UV-CL adhesion promoter	2,5%	5% max
UV Adsorber	8%	
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](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.