

Series

# UVB-E

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Type: UV traditional

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Printing process: screen printing

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Ink type: one and two-component

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Finish: glossy

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Materials: Polycarbonate, rigid PVC, Self-adhesive PVC, treated PET, treated PETG, treated Polyester, treated Polyethylene (HD-PE, LD-PE), treated Polypropylene

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Treated PET only with the addition of the UVH hardener

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Main features:

- . Does not contain NVP (N-vinyl-2-pyrrolidone).
- . Medium-high reactivity
- . Glossy finish
- . Pseudo-plastic ink of medium viscosity-ready to use
- . Medium flexibility
- . Good abrasion resistance
- . Excellent printability
- . Moderate solidity for outdoor exposure
- . With the addition of the relevant hardener, good chemical and physical solidity is obtained.

The UVB-E 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.

If necessary, help the adhesion of the ink modifying the surface tension of the various supports with specific treatments such as: plasma treatment, corona, flaming (physical treatments), cleaning or degreasing (chemical treatments).

It's possible to do tests even with post physical treatments.

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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), Volatile organic compounds

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

Not suitable for long outdoor applications.

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

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Drying process: UV

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The UVB-E 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 takes 1-2 days to complete.

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

Mechanical and chemical solidity:

Alcohol	
Surface hardness (Abrasion)	H
Water	

If the UVB-E Series ink is used as a two-component (addition of the related hardener), the chemical-physical and adhesion fastness generally increases considerably.

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.

These values can be obtained by pre-treating the various supports with flaming, corona or plasma methods.

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

If the ink is used as a two-component it is advisable to carry out the tests 4-5 days after printing.

The tests were performed with a 150.31 mesh on a white background.

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

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

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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%	(reactivity) 5% max
UV 292 photoinitiator	2,5%	(for whites) 5% max
UV 406 photoinitiator	2,5%	(for colors) 5% max
M 2000/S conc. levelling agent	0,4%	
UV-CL adhesion promoter	2,5%	5% max
UV Adsorber	8%	
Antistatic UV	1%	

For more information please refer to TDS "AUXILIARIES FOR UV"

#### 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.