

Series **3004**

Type: solvent

Printing process: pad printing

Ink type: one and two-component

Finish: glossy

Materials: ABS, Lacquered surfaces, Paper, Polyamide, Polycarbonate, Polymethacrylate (PMMA), Polystyrene, rigid PVC, SAN, Self-adhesive PVC, treated PET, treated PETG, treated Polyester, Wood

Not suitable for printing polyolefins.

The plastic materials indicated in "Applications" can differ in their chemical structure or productive, so it's recommended to carry out preventive tests before production.

Main features:

The formulation of the 3004 series contains a percentage of free radicals that allows the use of the hardener. This, by triggering the polymerization process, increases the chemical-physical performance.

- . Glossy
- . Medium coverage
- . Good flexibility
- . Quick drying
- . Good light fastness
- . Excellent solidity for external applications
- . Solvable during printing
- . Excellent barrier to the migration of plasticizers possibly contained on the substrates to be printed.

Thermoplastic substances are sensitive to tension cracks, especially PS and PC, due to the solvents present inside the ink. Pre-tests are absolutely essential for such printing applications.

3004 series mixed with hardener has a pot life of approx. 8h (at 20°C).

Higher temperatures and humidity will reduce pot life.

(suggested temperature at 20-25°C and low moisture content in the workplace).

Used as 2-component ink, 3004 series has to be mixed with hardener at a specified ratio prior to processing.

Thinner is added after addition of hardener.

The mixed ink should be allowed to pre-react for approx. 15 minutes prior to print.

The 3004 series was formulated with the use of substances and solvents with low environmental impact, in fact the following products are no presents:

- Solvents naphtha
- Aromatics
- IPA-PHA
- Cyclohexanone
- Phthalates
- Butyl glycol esters (G.B ester).

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): 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.

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

Outdoor resistance (years): 4

Suitable for outdoor application.

The pigments used have a solidity from 7 to 8 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 the 5-7% of UV adsorber to the ink.

Drying process: 15 minutes at room temperature

3004 series dries physically by evaporation of solvents or through chemical reaction.
Drying times depend on several factors:

- . Thickness of printed ink layer (single print, multi-layer print).
- . Type and amount of thinners/retarders used
- . Type of oven
- . Drying temperature
- . Type of substrate on which the ink is deposited.

Ink dries physically by evaporation of solvents:

- . 15-20 minutes at room temperature (depending on local conditions)
- . 45 sec at 50°C in an air circulation oven.

(The test performed in our laboratory was carried out under the following conditions: 8 mt/min, clichet at 36 microns, medium thinner 1000 DM-E at 20%, air circulation oven).

Two-component drying by polymerization:

When the series 3004 is additivated with the relative hardener, at the beginning the ink dries physically, followed by the polymerization reaction which takes place at room temperature (20°C) in at least 5-7 days.

If the printed film is heated in an oven at 80°C for about 10 minutes, the polymerization is completed within 48 hours.

Mechanical and chemical solidity:

Alcohol	even as a one-component
Cosmetics	as two-components
Detergents	as two-components
Gasoline	as two-components
Oils	as two-components

The tests must be carried out after 5-6 days from printing after complete polymerization.

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

110	111	112	115	117	120	121	122	124	130
131	132	133	136	140	141	142	150	151	160
165	104	104 BIS	105	106	107	108	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	75 RE	75 RE GLITTER	76 RE	76 RE GLITTER	77 RE	77 RE GLITTER	78 RE	78 RE GLITTER	79-050

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1080	1081	1082	1083	TP					

Please refer to the Glossy, Metallic, Fluorescent and 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 3004 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 metallised pastes composed with the relative transparent base 3004 70 TR, due to their particular composition, can oxidize.

The pot-life of the compounded METALLIC PASTES is about 8 working hours.

The other metallic shades are ready to use.

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.

In the range are also included the following shades:

160 HD Opaque white
 165 HD Opaque black
 165 S Non magnetic black

Auxiliaries and additives:

1000 DM-E medium thinner	20%	doesn't contain cyclohexanone and naphtha
1000 DL-E slow thinner	20%	doesn't contain cyclohexanone and naphtha
1000 DR-E fast thinner	20%	doesn't contain cyclohexanone and naphtha
1000H-N Green hardener	8%	for outdoor applications. isocyanate content < 0,1%
Retarder paste	10%	max
M 2000/S conc. levelling agent	0,5%	
Antisilicone/s	1,5%	
UV Adsorber	8%	
NPT matting powder	2%	6% max

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.

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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.