

Series

103

Type: solvent**Printing process:** pad printing**Ink type:** one and two-component**Finish:** satin**Materials:** Leather, Natural fabrics, Polyurethane, Rubber, Synthetic fabrics, Synthetic leather

Restrictions for vulcanized rubber

Main features:

Fast drying, satin finish, excellent elasticity and good opacity.

- . 103 series, used as a single-component, dries physically, i.e. by evaporation of solvents.
- . Excellent elasticity and flexibility depending on thickness of printed ink layer (single print, multi-layer print).

If used as a two component, in addition to the evaporation of solvents (physical mode), drying takes place also through chemical reaction with the relative hardener, giving the printed film better characteristics as:

- . stains solidity
- . solidity to washing at temperatures of 60°C with common detergents
- . solidity to dry cleaning
- . good stability for outdoor prints
- . maintaining elasticity using the 1000H-N hardener.

Because of 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, corona, flaming (physical treatments), cleaning or degreasing (chemical treatments).

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

In any case, we advise to not print siliconized material.

103 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 two component ink, 103 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.

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, Azo dyes, Bisphenol A (BPA), Formaldehyde, G-B Ester, Latex, Melamine, Persistent organic pollutants, Phthalates (listed in RoHS directive)

Note: shades in the fluorescent color chart contain formaldehyde.

Note: all our inks are formulated with non carcinogenic aromatic naphthas as the benzene content is below than 0.1% by weight.

IPA contamination are also possibile but always below the limit of 1000 ppm.

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Outdoor resistance (years): 4

Suitable for outdoor applications for periods not exceeding 3-4 years.

The used pigments have a solidity from 6 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.

Fluorescent shades (refer to the FLUO color chart) are formulated with special pigments which, due to the molecular constitution, do not guarantee high light solidity and are easily decomposed by electromagnetic radiation. Outdoor exposure cannot be longer than two months.

Drying process: 15 minutes at room temperature

103 series dries physically by evaporation of solvents or through chemical reaction.

Drying times depend on various 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)
- . 60 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 at 15%, air circulation oven).

Two-component drying by polymerization:

When the Series 103 is added 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 24 hours.

Mechanical and chemical solidity:

Detergents	normally used for dry cleaning
Flexibility (Elasticity or Bending)	good
Washings	up to 60°C

The chemical-physical resistances depend above all on the support on which the ink is printed. In any case, the best chemical resistance, is obtained by adding the relevant hardener. If the fabrics printed with the 103 series are ironed at average temperatures (cotton, synthetic fibers) they are not altered.

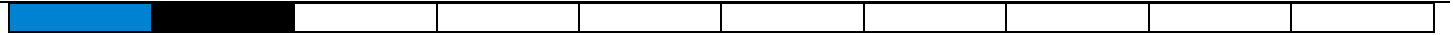
If 103 series is used as a two-component, the tests must be carried out 5-6 days after printing at room temperature. Otherwise, heat at 80°C for about 10 minutes and run the tests after 24 hours.

Colours range: EXTRA - M, INK SYSTEM, QUADRICROMIA

110	111	115	120	121	122	124	130	132	133
136	140	141	151	160	165	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							

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Please refer to the Matt, 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 103 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 103 70 TR, due to their particular composition, can oxidize.

The pot-life of the compounded METALLIC PASTES is about 8 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:

1000 DM medium thinner	20%	
1000 DL slow thinner	20%	
1000 DR fast thinner	20%	
1000H-N Green hardener	6%	for outdoor applications. diisocyanate content < 0,1%
1000H hardener	10%	
1000H-N hardener	10%	better elasticity and fastness for outdoor applications
Retarder paste	10%	max
M 2000/S levelling agent	1%	
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.

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:

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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.