

Series

XFE

Type: solvent

Printing process: screen printing

Ink type: two-component

Finish: glossy

Materials: Aluminium, Aminoplastic resins (hard-plast), Cellulose acetate, Cellulose acetate butyrate, Ceramic, Chrome metal, Epoxy resins, Glass, Iron, Lacquered surfaces, Metal (in general), Mylar, Nylon 6.6, Phenolic resins (hard-plast), Polyamide, Polymethacrylate (PMMA), Polyurethane, Stainless steel, treated PET, treated PETG, treated Polyacetal (POM) (hard-plast), treated Polyethylene (HD-PE, LD-PE), treated Polypropylene, Triacetate (Trevira), Wood

Main features:

To be used only by adding the relative 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 pot life of the ink is valid for a specified period of time, up to 8h/20°C.

Higher temperatures and humidity will reduce pot life (recommended temperature 20-25°C and low moisture content in the workplace).

The XFE Series ink can be used with two different hardeners:

We recommend the XFH-N-00 hardener or XFH-N Green hardener to print organic substances:

- PP, PE, PEHD, PELD (treated)
- thermoplastic plastics mentioned above
- lacquered surfaces

We recommend the XFH-GL hardener for printing inorganic substances:

- Glass
- Ceramic
- Aluminium and metal in general
- Duroplast

The advantage of this technology is the use of a single ink (reduction of stock), which varies in its performance with the only variation of the catalyst.

Furthermore, in formulating this series, low environmental impact solvents were used, in fact the following are not present:

- Solvents naphtha
- Aromatics
- IPA-PHA
- cyclohexanone
- Phthalates
- Butyl glycolates (GB ester)
- Halogens

Certifications: CLP/GHS (EC 1272/2008), Conflict minerals free, EN 71-3, Reach (EC 1907/2006), RLS-EuPIA (formulated with substances accepted by RSL), 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, 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): 1

Not suitable for long outdoor applications.

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 5-7% of UV adsorber to the ink.

Drying process: 15 minutes at room temperature

XFE 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:

- . 10-15 minutes at room temperature (depending on local conditions).
 - . 20-30 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, 120.34 screen printing mesh, medium thinner XFE-DM at 15%, air circulation oven).

Two-component drying by polymerization:

The polymerization (chemical reaction process) of the ink occurs about 15 minutes after the addition of the catalyst.

The polymerization times depend mainly on the temperature.

At a minimum temperature of 20°C, Series XFE ends its cross-linking process in about 6-7 days.

An important increase of temperature accelerates the cross-linking process.

At a temperature of 140°C (film obtained with a 120.34 screen printing mesh, a dilution with a medium thinner of XFE-DM at 15%, 30 minutes inside oven) we obtain a film with a high degree of polymerization and with a maximum of solidity.

Mechanical and chemical solidity:

Acids	excellent
Alcohol	excellent
Aliphatic organic solvents	excellent
Aromatic organic solvents	excellent
Bases	excellent
Brake oil	excellent
Detergents	commonly used in dishwashers. good (with XFHE-GL)
Diesel	excellent
Flexibility (Elasticity or Bending)	good (with XFH-N)
Gasoline	excellent
Mirroring effect	good (with XFH-GL)
Surface hardness (Abrasion)	good
Washings	excellent (about 300 cycles in the dishwasher in standard conditions of use, 45-60°C with low-alkaline detergents)
Water	good (with XFH-GL)

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To obtain the maximum performances from the XFE ink + XFH-GL hardener combination, we recommend passing through the oven at 130-140°C for 5- 10 minutes.

The XFH-GL hardener is sensitive to humidity, this could cause printing problems (e.g. make the film from glossy to opaque), it is recommended to always keep the containers tightly closed and to use the minimum packs of 250 gr.

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

We recommend a preliminary pre-treatment (flame or doped silane flame) before production.

The laboratory tests were carried out with a fully polymerized film (48 hours in a muffle at 80°C), using a 120.34 screen printing mesh, 15% medium thinner XFE-DM. Or, at room temperature (20°C) after 6-7 working days.

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

110	111	112	115	117	120	121	122	124	130
131	132	133	134	136	140	141	142	150	151
160	165	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	79-050	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 XFE 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 XFE 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

Auxiliaries and additives:

XFE-DM medium thinner	15%	doesn't contain cyclohexanone and naphtha
XFE-DL slow thinner	15%	doesn't contain cyclohexanone and naphtha
XFE-DR fast thinner	15%	doesn't contain cyclohexanone and

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		naphtha
XFH-N Green hardener	12%	for outdoor applications. isocyanate content < 0,1%
XFH-N-OO hardener	14%	
XFH-GL hardener	9%	
M 2000/S conc. levelling agent	0,4%	
Universal antifoam agent	0,5%	
Antisilicone/s	1,5%	
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:

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.