SERIGRAFIA

Type: solvent

Printing process: screen printing

Ink type: two-component

Finish: glossy

Materials: Aluminium, Aminoplastic resins (hard-plast), Carbon, Epoxy resins, Glass, Iron, Lacquered surfaces, Metal (in general), Nylon 6.6, Phenolic resins (hard-plast), Polyamide, Polycarbonate, Polyurethane, Signage, Stainless steel, treated PETG, treated Polyacetal (POM) (hard-plast), treated Polyester

## Main features:

Good coverage
. Excellent brilliance
. Good printability
. Excellent solidity to acids, bases, greases, organic solvents and oils.
. Excellent mechanical resistance
. Ink for industrial applications where high solidity is required
Suitable for applications that need to be exposed to the outside
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 $8 \mathrm{~h} / 20^{\circ} \mathrm{C}$.
Higher temperatures and humidity will reduce pot life (recommended temperature $20-25^{\circ} \mathrm{C}$ and low moisture content in the workplace).

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

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): Alogens, Animal origin ingredients, Azo dyes, Formaldehyde, G-B Ester, Latex, Melamine, PAH, Persistent organic pollutants, Phthalates (listed in RoHS directive)

Note: shades in the fluorescent color chart contain formaldehyde.
Note: inks are formulated without aromatics naphthas, potential IPA contaminations are minimal.
Outdoor resistance (years): 6
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 5-7\% of UV adsorber to the ink.

Drying process: 20 minutes at room temperature

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XF-DD 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)
$.30-40 \mathrm{sec}$ at $50^{\circ} \mathrm{C}$ in an air circulation oven.
(The test performed in our laboratory was carried out under the following conditions: $8 \mathrm{mt} / \mathrm{min}, 120.34$ screen printing mesh, medium thinner XF-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 $20^{\circ} \mathrm{C}$, Series XF-DD ends its cross-linking process in about 6-7 days.
An important increase of temperature accelerates the cross-linking process.
At a temperature of $140^{\circ} \mathrm{C}$ (film obtained with a 120.34 screen printing mesh, a dilution with a medium thinner of XF-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:

| Mechanical and chemical solidity: |
| :--- |
| Acids excellent <br> Alcohol excellent <br> Aliphatic organic solvents excellent <br> Aromatic organic solvents excellent <br> Bases excellent <br> Brake oil excellent <br> Diesel excellent <br> Flexibility (Elasticity or Bending) good <br> Gasoline excellent <br> Surface hardness (Abrasion) good |

The laboratory tests were carried out with a completely polymerised film ( 48 hours in a muffle at $80^{\circ} \mathrm{C}$ ), using a 120.34 screen printing mesh, medium thinner XF-DM at 15\%.
Or at room temperature ( $20^{\circ} \mathrm{C}$ ) after 6-7 working days.
If necessary, help the adhesion of the ink modifying the surface tension of the various supports with specific treatments such as: plasma treatment, crown, flaming (physical treatments), cleaning or degreasing (chemical treatments).

It's possible to do tests even with post physical treatments.
Colours range: EXTRA - M, INK SYSTEM, QUADRICROMIA, SEGNALETICA

| 110 | 111 | 112 | 115 | 117 | 120 | 121 | 122 | 124 | 130 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 141 |  |  |
| 131 | 132 | 133 | 134 | 136 | 140 | 141 | 142 | 150 | 151 |
| 160 | 165 | 10 GL | 11 GS | 12 AR | 21 RS | 22 RC | 25 MG | 27 VT | 32 BL |
|  |  |  |  |  |  |  | 1083 | TP | $12-1-\mathrm{S}$ |
| 40 VR | 60 BN | 65 NR | 70 TR | 1080 | 1081 | 1082 |  |  |  |
|  |  | $38-3-\mathrm{S}$ | $66-\mathrm{S}$ | $77-3-\mathrm{S}$ | $80-1-\mathrm{S}$ |  |  |  |  |
| $15-\mathrm{S}$ | $23-3-\mathrm{S}$ | 38 |  |  |  |  |  |  |  |

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 XF-DD 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 XF-DD 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. In the range are also included the following shades:

160 HD Opaque white

165 HD Opaque black

The range of shades includes signage colors:

12-1-S YELLOW SIGNS
15-S SIGNAL ORANGE
38-3-S BLUE SIGNS
77-3-S GREEN SIGNS
23-3-S RED SIGNS
80-1-S BROWN SIGNS
66-S BLACK SIGNS
Auxiliaries and additives:
Auxiliaries and additives:

| XF-DM medium thinner | $15 \%$ |  |
| :--- | :--- | :--- |
| XF-DL slow thinner | $15 \%$ |  |
| XF-DR fast thinner | $15 \%$ | for outdoor applications. diisocyanate <br> content < 0,1\% |
| XFH-N Green hardener | $17 \%$ | pot-life 6-8 hours |
| XFH-N hardener | $33 \%$ |  |
| XFH-N-OO hardener | $20 \%$ | max |
| Retarder paste | $10 \%$ |  |
| M 2OOO/S conc. levelling agent | $0,5 \%$ | only for signage |
| M 3OOO levelling agent | $0,5 \%$ |  |
| Universal antifoam agent | $1 \%$ |  |
| Antisilicone/s | $1,5 \%$ | $6 \%$ max |
| UV Adsorber | $8 \%$ | 6 |
| NPT matting powder | $2 \%$ |  |

## Ink removal:

DACS solvent
Lavaggio telai solvent
Aprimaglia Spray

## Series <br> XF-DD

## STORAGE:

Please keep the cans in a dark place, at temperature of $15-25^{\circ} \mathrm{C}$.
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.

