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Series PLT 12

Type: solvent

Printing process: pad printing

Ink type: one and two-component

Finish: glossy

Materials: ABS, Cardboard, Lacquered surfaces, Paper, Polyamide, Polycarbonate, Polymethacrylate (PMMA), Polystyrene, rigid PVC, SAN, treated PETG, treated Polyester

Not suitable for printing on polyolefins

Main features:

. Glossy
. Moderate coverage
. Good flexibility
. Quick in drying
. Good light fastness
. Excellent solidity for outdoor applications
. Soluble during the print
. Excellent barrier to the migration of plasticizers eventually contained on the supports 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.

PLT 12 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, PLT 12 series has to be mixed with hardener at a specified ratio prior to processing. Thinner is added after addition of hardener.
Leave the mixed ink pre-reacting 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, Aromatic Hydrocarbons, Azo dyes, Bisphenol A (BPA), 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): 5

Suitable for outdoor application.

The used pigments have a solidity from 7 to 8 DIN.

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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

PLT 12 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)
. 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, cliché at 36 microns, medium thinner PLA at 15%, air circulation oven).

Two-component drying by polymerization:

When the Series PLT 12 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 24 hours.

Mechanical and chemical solidity:

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

To obtain a good solidity to agents like petrol, cosmetics, detergents, oils, etc. it's necessary to add 10% of PLH or PLHN hardener. The

PLHN hardener is recommended for printing items that must be exposed outside.

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

Colours range:

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

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

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

Ink System shades are:
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:

PLA medium thinner	20%	
PLD slow thinner	20%	
PLB fast thinner	20%	
PLH hardener	10%	
PLHN hardener	10%	for outdoor applications
Retarder paste	10%	max
Levelling agent	1%	
Universal antifoam agent	1,5%	
Antisilicone/s	1,5%	
UV Adsorber	8%	
Matting powder	2%	6% max

Ink removal:
PLDL solvent

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:

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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).**

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.