COMEC Italia

COMEC ITALIA SRL Piazzale del Lavoro, n.149 - 21044 CAVARIA (VA) ITALY
Capitale Sociale €. 520.000,00 i.v. - P. IVA 02143650121 MA03
Ph. + 39 0331 219516
Fax + 39 0331 216161
info@comec-italia.it
www.comec-italia.it

Series

PLT 4

Type: solvent

Printing process: pad printing

Ink type: two -component

Finish: glossy

Materials: Aluminium, Aminoplastic resins (hardplast), Cellulose acetate, Cellulose acetate butyrate, Iron, Lacquered surfaces, Metal (in general), Mylar, Nylon 6. 6, Phenolic resins (hardplast), Polyamide, Polyurethane, treated PETG, treated Polyacetal (POM) (hardplast), treated Polyester, 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. Leave the mixed ink pre-reacting 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 (suggested temperature at 20-25 °C and low moisture content in the workplace).

. Good coverage
. Good brilliance
. Good printability
. Good solidity to acids, bases, fats, many organic solvents and oils.
. Good mechanical strength
. Due to the binders present inside the formulation (epoxy resin), the PLT 4 series is suitable for indoor and short-term outdoor applications.

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, 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 naphtas as the benzene content is below than 0.1% by weight. IPA contamination are also possible but always below the limit of 1000 ppm.

Outdoor resistance (years): 1

Not suitable for 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.

Drying process: 20 minutes at room temperature

PLT 4 series dries physically by evaporation of solvents or through chemical reaction.

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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, cliché at 36 microns, medium thinner PLA 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 PLT 4 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 36 micron cliché, a dilution with a medium thinner of PLA 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
Diesel	excellent
Flexibility (Elasticity or Bending)	good
Gasoline	excellent
Surface hardness (Abrasion)	good

The laboratory tests were carried out with a completely polymerized film (48 hours in a muffle at 80°C), using a pad printing cliché at 36 microns, medium thinner PLA at 15%. Or at room temperature (20 °C) after 6-7 working days.

Colours range:

110	111	112	115	117	120	121	122	124	130
131	132	133	134	136	140	141	142	150	151
160	165	165 S	110 HD	111 HD	112 HD	115 HD	120 HD	121 HD	122 HD
130 HD	136 HD	140 HD	160 HD	165 HD	10 GL	11 GS	12 AR	21 RS	22 RC
25 MG	27 VT	32 BL	60 BN	65 NR	70 TR	40 VR	75 RE	75 RE GLITTER	76 RE
76 RE GLITTER	77 RE	77 RE GLITTER	78 RE	78 RE GLITTER	79 -050	1080	1081	1082	1083
TP									

Please refer to the color charts. The Ink System are 12 colour shades for mixing of RAL, PMS and HKS colours.

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The metallic shades are available only by mixing the relative pastes with the Transparent Base PLT 4 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 metallized pastes composed with the relative transparent base PLT 4 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.

Auxiliaries and additives:

PLA medium thinner	20%	
PLD slow thinner	20%	
PLB fast thinner	20%	
PLH hardener	25%	
Retarder paste	10%	max
levelling agent	1,5%	
Universal antifoam agent	0,4%	
Antisilicone/s	1,5%	
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:
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 label ling are compliant with the **CLP / GHS regulation (EC 1272/ 2008).**

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.