



Fields of application

These versatile one or two component ink can be used for printing on many substrates :

- ABS,
- Polyethylene
- Rigid PVC,
- SAN,
- PA,
- PET,
- polycarbonate,
- polystyrene,

Different substrates may differ in printability due to difference in surface properties hence preliminary trials are essential before printing

Application process:

These inks are suitable for both screen /pad/spray printing and thermoforming.

These inks can be used with all pad printing machines with clichés and pads currently used for industrial applications. The printing result may be affected by the type of screen, depth of the pad printing cliché plate and shape, and hardness of the printing pad.

A temperature between 20-25°C and humidity around 40-60% will be ideal for printing processes to achieve optimum adhesion.

For Spray printing, all guns standard or HPLV(high pressure low volume) can be used with nozzle diameters 0.8,1, 1.2 mm. It is advised to use very fast drying thinners.

Pre-treatment of PE and PP must be performed by Flame Treatment or by CORONA-discharge in order to ensure proper adhesion of the ink onto the surface.

Characteristics

- The ink should be stirred well before printing and during production.
- Very fast drying properties good mechanical and chemical resistance.
- This is high glossy, physically drying and chemical cross-linking pad/screen printing ink .
- **High Gloss** but can be modified as matt ink. It can achieve 70-90 gloss units at 60-degree angle.
- **As 2-component ink** :Based on the substrate and the requirement, Catalyst can be added to the ink before printing.
- Always add catalyst(hardener) between 90:10 ratio and 80:20 ratio by weight, 90/80 parts being ink and 10/20 parts of catalyst. Temperature should not go below 15°C during processing and curing .
- After mixing the above add dilutant up to 15%



- to start off with, increasing as per requirement
- **Note:** after mixing, the ink mixture may feel to be heated . This is natural and expected. Please let it settle for 15 minutes before start of production.
- **Pre-reaction time:** The ink/catalyst mixture should be allowed to pre react for 15-20 minutes.
- **Pot life :** Pot life may depend on temperature for the ink/catalyst mixture.

20°C–24°C
(approx. 10-12 hours)

25°C – 30°C
(less than 8 hours)

Higher temperatures will reduce pot life.

- **Humidity:** Try to maintain humidity between 50% - 70 %. Lower humidity may result in static charge and higher may result in curing of ink. Catalyst (hardeners) are very sensitive to humidity.
- **Fade Resistance**
Excellent fade resistance pigments are used for Farbatoy . Hence all the basic shades are suitable for outdoor application for up to 3 years
Light fast and weather resistant
- Free from phthalates, halogens and BPA as well as cyclohexanone, butyl glycolate and aromatic solvents.
- These inks comply with EEC regulation EN 71-3 (Safety of Toys), part 3 (Migration of Certain Elements).

Colour shades

All shades are intermixable. Mixing with other ink types must be avoided.

All basic shades are included in our FarbaTech colour cards. They are basis for the calculation of individual colour matching formulas, as well as for shades of the common colour reference systems HKS®, PANTONE®, and RAL*.

Farbatoy		
BASIC COLOR	SHADES	CODE
Yellow	Light	FJ3 203
	Medium	FJ3 201
Red	orange	FJ3 306
	Light	FJ3 307
Blue	Standard	FJ3 308
	Voilet	FJ3 505
White	standard	FJ3 506
	opaque	FJ3 100
Black	standard	FJ3 101
	opaque	FJ3 900
		FJ3 901

Additives

CATALYST

Catalyst helps in increasing adhesion of ink film to the surface by chemically cross linking with the ink pigments. Hence, there are standard catalysts based on the ink composition.

Standard catalyst for this ink is CAT 135:

Catalyst 5-10% CAT 135 (for optimum adhesion)



Technical data sheet

FARBATOY

It should be noted that proper adhesion with hardener (chemical and physical resistance) can be attained after minimum 36 hrs of printing at 20-25 °C. Therefore, any adhesion test should be done after 36-48 hrs for proper results.

Temperature lower than 15°C should be avoided as cross linking does not occur at low temperatures. For this reason, post treatment is desirable in many cases. Heating at 150 -180 C for 20-30 minutes helps in improving adhesion of ink film over surface.

Dilutant

Prior to application, the required printing viscosity should be achieved by addition of dilutant.

Addition 15-30%

Dilutant, standard DLT 138
(addition: 15 - 25 %)

Dilutant, very fast DLT 140
(addition: 15 - 25 %)

Dilutant, slow DLT 134
(addition 5-10%)

Levelling agent

These agents fix the ink pigments uniformly which enables to obtain uniform shade of desired colour.

Excessive addition should be avoided since high percentage can negatively influence printability.

Levelling agent EQS 223
5-10%

Cleaner

The cleaner RFR 197 is recommended for manual cleaning or automatic cleaning of the working equipment.

Shelf life

Shelf life depends upon the formula/reactivity of the ink system as well as the storage temperature.

The shelf life for an unopened ink container if stored in a dark room at a temperature of 15 - 25 °C is 2 years.

Precaution

For further information on the safety ,storage and environmental aspects concerning these products please refer to Safety Data Sheet

Addition Technical information can be obtained from our Product safety department.

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The above statements are accurate to our best knowledge and belief. However, due to the great number of possible influences during the manufacture of the substrate and the variation in the application process suggest that suitability testing take place under actual conditions before production. No legally binding guarantee of certain properties or of the suitability for a definite application purpose can be derived from the above information.

Technical data sheet
FARBATOY

