

easyCARD

Series 382

Laminable, silky-gloss PVC screen printing ink for technical and graphic applications

Screen printing ink with high opacity, suitable for many plastic materials, especially PVC substrates. Suitable for the production of many card systems produced in multi layer technique.

Suitable for a wide range of substrates such as rigid and flexible PVC, especially PVC for laminating and welding technique, PVC adhesion foils, coated polyester, paper and boxboard as well as many coatings.

Because of the diverse range of material compositions it is imperative that the printer carries out trials to evaluate the ink suitability.

Uses

Suitable for most point-of-sale and industrial uses on labels and stickers, signprinting and applications in the security area for the production of check- and identity cards, credit- and telephone cards.

The binder composition allows a laminating or welding under high temperature without destroying the inks. If outdoor uses with self adhesive foils are required care should be taken because of plasticizers in the material. Your own tests have to be done in any case.

When the material is getting older and therefore shows fluctuations on different areas this may cause a negative influence between substrate and ink in case of long term applications.

The high quality raw materials which are used for this system make Series 382 also suitable for external use or where greater mechanical and chemical resistance is needed (additional use of hardeners [e.g. Series 600-HDA or Series 600 HDR (outdoor) or Series 600-HDI (indoor)] at approx. 10% by weight.

In exceptional cases Hardener agents can cause "chapping" and as consequence a worsening of adhesion.

Detailed information about the different Hardeners you will find in the Technical Leaflet of Series 600.

Properties

The ink has been developed to give excellent flow and stay open characteristics ensuring high quality printing of both line and fine copy details on hand and flatbed machines as well as on cylinder printing machines. The recommended solvents guarantee stay open and self solvency of inks as well as quick drying of printed substrates.

Additives

For optimum printing 10-20% (by weight) of universal thinner Series 300-017 should give consistency of print and good working viscosity under normal circumstances. Rotary printing requires thinning with Series 300-019 at

approx. 20-30% by weight. For more extreme conditions please refer to the Technical Leaflet "Series 300 screenprinting additives".

Any addition of additives may result in altered product characteristics and could therefore influence the ink stability in a negative way.

Color shades

Series 382 is free of heavy metals (DIN EN 71, part 3), monopigmented and suitable for matching with the MS-color mixing system.

Available colors:

Series 382 – 1000	Lemon yellow
Series 382 – 1100	Yellow (light)
Series 382 – 1200	Yellow (reddish)
Series 382 – 2000	Orange
Series 382 – 3000	Carnation red
Series 382 – 3100	Transparent red
Series 382 – 3200	Transparent dark red
Series 382 – 3300	Transparent magenta
Series 382 – 4000	Transparent violet
Series 382 – 5000	Transparent blue
Series 382 – 6000	Transparent green
Series 382 – 7000	Red / brown
Series 382 – 8000	Mixing black
Series 382 – 9000	Mixing white
Series 382 – 0900	Ultramarine (non-fade properties)

The transparent inks are suitable for color adjustment whilst keeping brilliance of color matches and are also suitable for tinting with metallic pigments.

Standard colors according to color chart ST:

31 bright shades (shades 08-38)

9 fluorescent shades (shades 40-47)

For lamination we recommend to use 40% by weight of binder Series 382-07 (instead of the formula-indicated 20% by weight) in the MS-color formulation, in order to maximize the lamination consistency.

Metallics:

Series 382-100/F	Silver, fine
Series 382-100/M	Silver, medium coarse
Series 382-100/G	Silver, coarse
Series 382-101	Britannia silver
Series 382-102	Gold, light
Series 382-103	Gold, medium
Series 382-105	Ducat gold
Series 382-106	Copper

Various special effects can be elaborated according to customer desires, these include metal-free bronze as well as the ST-formulas

Pearlescent silver	Series 382-200
Silver, coarse	Series 382-02299.

Following matt colors are available within the standard color range; each other basic color shade will be sold as matt version upon request:

Series 382 – 8000/MT	Black, matt
Series 382 – 9000/MT	White, matt

Metallic colors can show a splitting effect after laminating process, so that previous tests and / or consultations of the manufacturer are inevitable in order to clarify the product suitability under local conditions. The metal free pigmented shades are especially suitable for HF Bonding.

Additionally the following highly opaque colors are available

Series 382-00	ST-White, <u>not</u> laminable and the laminable Opaque white
Series 382-00/393	Special white, laminable (<i>dilutable only with thinner Series 310-017</i>)
Series 382-33	Black, laminable.
As standard the matt colors	
Series 382-33-MT	Black, matt, laminable
Series 382-00-MT	White, matt, <u>not</u> laminable and the directly laminable Silver Metallic Colors
Series 382-100/F	Silver, fine, laminable
Series 382-100/M	Silver, medium coarse, laminable
Series 382-100/G	Silver, coarse, laminable.

Trichromatic colors:

Series 382 – 0950	Cyan
Series 382 – 0960	Yellow
Series 382 – 0970	Magenta
Series 382 – 0980	Deep black

Blending pastes:

Series 382 – 04	Extender base
Series 382 – 06	Retarder Gel
Series 382 – 07	Binder paste

As more color intense versions the concentrates

Series 382-0955	Cyan, concentrated
Series 382-0965	Yellow, concentrated
Series 382-0975	Magenta, concentrated
Series 382-0985	Black, concentrated

are available for modification or pure print.

To expand the special uses there are also following standard varnishes available

Series 382 – 05 Gloss lacquer
Series 382 – 05/MT Matt lacquer,

which can be completed by individual special formulations as for example thermo varnishes, polish systems or similar.

If the inks in Series 382 are for exterior use we recommend overprinting with special varnish

Series 386 – 5700 for best non-fade properties. Using this combination give unsurpassed results for a solvent based one component system.

All above mentioned colors conform to EN 71, Part 3 (safety of toys, migrations of various elements) and are heavy metal free. All inks have a blue wool rating of 6-8 (DIN 16525) with the **exception of fluorescents and MS-color shade 0900 (Ultramarine)**. Care should be taken with white or clear lacquer discoloration under strong lighting conditions (reducing of light-fastness).

Drying

The solvent composition of universal thinner Series 300-017 is especially formulated to stay open in the screen so retarders are usually not necessary; the ink still has quick drying properties, accelerated drying can be achieved using hot air jets or infra-red.

Meshes

The Series 382 is suitable for use with all usual meshes and capillary films.

Cleaning

The Series 382 can be cleaned down with most usual solvent based cleaners but Printcolor AG recommends universal cleaner Series 300-URS or Series 300-BRS.

Storage

Under normal storage conditions (low temperature changes 20-35°C, humidity 20-70%) the ink can be stored for up to 2 years (6 months for metallic inks) without deterioration of ink properties.

Packaging

Available in standard 1kg and 5kg polyethylene tubs that are suitable for re-cycling after removal of ink remnants. The un-hardened ink requires special waste disposal (wastekey 55509 in Germany, special waste X (1640) Switzerland).

Precautionary measures

Read material safety data sheet prior to processing.

The material safety data sheets according to OSHA form contain indication of hazardous ingredients, TLV-level and instructions for precautions when processing, handling and storing as well as first aid. The information given in the MSDS refers to processing as described in this technical leaflet. The statements in our leaflets have been made to the best of our knowledge and are given without any obligation. They serve to advise our business associates, **but it is absolutely necessary** to make your own printing tests under local conditions, with regard to the intended purpose prior to starting the printing job. In case of any doubts please contact our technical advisors. The application, use and processing of the products delivered by us are beyond our control. This is subject to your responsibility and there is no liability or guarantee on our part. In case of justified complaints the manufacturer can only be made liable for the countervalue of the used ink system.

Addition of not mentioned products or competitors products are on your own risk and releases Printcolor Screen Ltd. of any later demands, especially in cases of damage and loss caused by alien products.

All former leaflets are no longer valid.

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