

General Overview

752 Series ink is a highly opaque 1 or 2-component glossy pad printing ink system that is based upon very resistant raw materials. This popular and universal ink system is utilized on a wide variety of different plastic materials, metals and coated products. Series 752 is also suitable for printing on duro-plastics and wood items. Based on highly resistant resins, this industrial ink is well suited for both indoor and outdoor applications.

Substrates

The properties of this ink line allow for trouble-free printing on a wide range of different substrates including; soft and rigid PVC (no self adhesive materials), Acrylics (PMMA - Caution: risk of brittleness on certain injection molded materials), polycarbonate, polyolefin's (pre-treated PE/PP), lacquered and coated surfaces. Series 752 is also suitable for printing on polyamide (Nylon) and different elastomers.

Special instructions for polystyrene and its modifications (ABS, SAN, etc.) the use of special thinner Series 10-0330 is recommended.

In addition to these plastic substrates, it is also possible to print on metals, aluminum (raw, anodized, brushed), compound materials such as Alucobond, Dibond and Vekaplan AL, wood and other natural substrates. Furthermore 752 is suitable for printing on melamine substrates.

A crosshatch test with tape test (including fingernail test) was conducted with the ink formulated as a 2-component ink system, mixed 4:1 with hardener 700-HDA. The results were made upon 100 h rest phase under normal conditions.

Due to the wide variety of printable materials and the multitude of various surface properties makes it absolutely necessary for the end user to conduct their own printing tests under local conditions with regard to the intended purpose prior to starting the production. Due to the constant development and optimizing of Series 752 the range of practical substrates may increase.

Applications

This 2-component ink system is used for mostly decorative and functional applications on many substrates. Series 752 is used for printing; adverting specialty items (ASI), industrial applications, automotive components, electronic components, medical devices, general packaging, etc.. The high quality raw materials used, make Series 752 well suited where high mechanical and chemical resistance is needed, and also provides good weather-ability.

The recommended hardener system is Series 700-HDA, mixed at a 4:1 ratio for all plastics and metals. Series 752 is based upon several different polyester and acrylic based resins, hence Series 752 is well suited for outdoor use and the gloss level is stable. Furthermore it is also possible to work with the other hardeners in the 700 Series; 700-HDI and 700-HDR (special for baking processes).

Characteristics

This modern pad printing ink is suitable for both open inkwell and closed cup systems. Series 752 is "iron free" so the printing problems that are associated with inks that contain iron are not present. This ink line has been developed to combine rheologic properties for printing both solid artwork images with a smooth finish, and for printing fine line details. With a full range of solvents available; (700-017 thinner, 10-0330 thinner, 700-018 and 10-02637 retarders and 700-019 accelerator) you can achieve precise printing results with fast tack-free drying on the printed material.

Greater resistance to chemicals will be realized in a time range of 72 to 96 hours, depending upon your specific conditions (humidity, temperature, etc.). A forced hot air curing with 285° to 320° F for a

period of 20-30 minutes is always helpful.

Auxiliary agents

Series 752 has been developed to provide user-friendly handling. This means, that it is normal to reduce the inks viscosity by adding the universal thinner Series 700-017. For most operations you can add approx. 15% by weight to achieve long-term and consistent printing results in both open and closed cup machinery.

With rotary pad printing equipment it requires a higher dilution with thinner and we recommend using accelerator Series 700-019 and adding approx. 20% by weight.

The optimized mixing ratio with hardeners is always 4 parts ink to 1 part hardener (4:1). We recommend using hardeners 700-HDA and 700-HDR (for baking process) for all metals and plastics. The pot life is in direct relationship to the regional conditions always around 8 hours. The experience shows that the 2-component metallic inks have a reduced "pot life" typically around 4 to 5 hours.

Furthermore Series 752 ink can be used as a 1-component ink system without the addition of a hardener. You may find that in decorative applications where there is not a high requirement for chemical and abrasion resistances, this ink system without a hardener may perform very well. The main advantage is there is virtually no "pot life" when this ink system is used without a hardener.

There are other useful additives that you may find useful and they are outlined in the Technical Bulletin on Series 700 Additives for pad printing inks. Pigments and Light Fastness
The high opaque ink line Series 752 is heavy metal free and mono-pigmented. So in many cases a pre-print with white background to achieve the desired color shade is not always necessary.

MIXING SYSTEM COLORS

A wide range of high-density colors are available to cover practically the full color chromatic spectrum:

Series 752-1005	MS-Lemon yellow
Series 752-1205	MS-Maize yellow
Series 752-2005	MS-Orange
Series 752-3005	MS-Carnation red
Series 752-4005	MS-Violet
Series 752-4505	MS-Cobalt blue
Series 752-8005	MS-Black
Series 752-9005	MS-White

In addition to these opaque base colors listed above we also offer five transparent, yet highly pigmented color shades for special mixtures and (sometimes) to increase the brilliance. As a special note, when used in combination with metallic particles the printing results can be very attractive. The five transparent shades are as follows:

Series 752-1105	MS-Transparent med. yellow
Series 752-3105	MS-Transparent glaze red
Series 752-3305	MS-Transparent magenta
Series 752-5005	MS-Transparent blue
Series 752-4005	MS-Transparent green

All color shades, including the opaque base colors and the transparent base colors are highly pigmented and at the moment are the most opaque pad printing inks on the market.

MATT COLORS - As standard inks we offer also the matt versions:

Series 752-8005/MT	Black, matt
Series 752-9005/MT	White, matt

Upon special request we can also provide all Series 752 base colors and individual colors in either semi-matt or matt finish.

PROCESS COLORS - The process colors for 4-color halftone prints are ready to print and follows the Europe scale:

Series 752-0950	Cyan Europa
Series 752-0960	Yellow Europa
Series 752-0970	Magenta Europa
Series 752-0980	Black Europa

In this line we also offer a high-concentrate formulation to get higher density values. Part numbers are as follows:

Series 752-0955	Cyan, concentrated
Series 752-0965	Yellow, concentrated
Series 752-0975	Magenta, concentrated
Series 752-0985	Black, concentrated

TRANSPARENT COLORS - The transparent bases are as follows:

Series 752-04	Transparent paste
Series 752-06	Thixotropic paste

VARNISHES - As standard varnishes we offer the following systems:

Series 752-05	Varnish, glossy
Series 752-05-MT	Varnish, matt
Series 752-07	Varnish, textured

METALLIC COLORS - For metallic effect colors we offer the standard range:

Series 752-100	Silver, resistant
Series 752-101	Silver, brilliant
Series 752-102	Gold, light
Series 752-103	Gold, standard
Series 752-105	Gold, ducat
Series 752-106	Copper

All inks of this series are non-toxic and follow the Europe regulation EN 71, part 3 (Safety of toys, migration of certain elements). All pigments used in Series 752 shows a light fastness of 6-8 according to wool scale (DIN 16525). If the color shades are reduced-with high amounts of white or transparent systems, light fastness might also be reduced.

Drying

The composition of the solvents ensures both long-lasting stability of the viscosity in the ink trays and ink cups and quick release of solvents in the dabbing process. The pad printing system Series 752 doesn't show any corona formation, ensures problem free transfer, as well as fast drying on the printed material. There's normally no need for any special drying aggregates.

When using our universal thinner Series 700-017 it is not (in most cases) necessary to use any retarder. Our experience shows that the accelerator 700-019 works well in high-speed closed cup systems.

As always, all of the 700 series thinners, retarders and accelerators can be combined (mixed) to provide a perfect evaporation rate for your specific printing environment.

Printing Clichés

Series 752 is well suited for use on both polymer and steel clichés and Series 752 doesn't contain any ingredients that may attack polymer clichés or causes oxidation on steel clichés.

Pads

Selecting the correct type of pad, shape and shore-hardness depends largely upon the item to be printed (the shape, structure, texture, surface tension, etc.). All Printcolor Series 752 inks can be used with all types of silicone pads. Prior to use and during usage it is important to properly handle printing pads. You should always follow the manufacturers instructions for breaking a pad in. Some pads require solvent to break them in. During normal use during production it is critical to keep the printing pad cleaned. This should always be done with using adhesive tape and you should NOT CLEAN PADS WITH SOLVENTS. To keep pads healthy and running well, they can be reactivated using the Series 10-03775 pad rejuvenator.

Cleaning

Wet pad printing ink or not completely cured inks can be removed with the Printcolor solvent based cleaning agents. Pad printing-specific universal cleaning agents like Series 700-URT and Series 700-BRT are the most suitable. Removal of completely cured inks is time consuming and usually only possible using highly aggressive solvents or stripping agents.

Storage

Under normal conditions (limited change of temperature, moderate temperatures of 68 to 80° F, humidity 20 - 70%) we guarantee a shelf life of 24 months for standard colors and a shelf life for metallic colors of 12 months.

Packing

Series 752 are available in both 1 and 5 kg polyethylene containers. White ink is also available (special order) in 2 kg PE containers. Removed residues of cured ink can be recycled with a Polyolefin recycling plant. Any packaging that containing unhardened residue of ink are subject to special waste disposal regulations. Regulation may vary from state to state so please check with your local regulating governing body for specific requirements.

Precautionary Measures

Read all material safety data sheets prior to processing or using any Printcolor product.

The material safety data sheets, according to OSHA format, contain indication of hazardous ingredients, TLV-level and instructions for precautions when processing, handling and storing as well as first aid procedures. 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 doubt please contact our technical advisors. The application, use and processing of the products delivered by us are beyond our control. This is subject to our responsibility and there is no liability or guarantee on our part.