

Technical leaflet

Screen printing ink

SERIES 388

Universal PVC and plastic screen printing ink for technical and graphic applications

A silk finish ink giving good coverage and mileage, suitable for interior or external use for many graphic and industrial applications on various man-made substrates.

Substrates

Suitable for a wide range of substrates such as rigid and flexible PVC, coated polyester & polycarbonate, pre-treated polyolefines (PE/PP), many lacquered & coated surfaces such as celluloseacetate & CAB, paper and boxboard. With use of thinners series 10-0330 good adhesion will be obtained on polystyrene and its derivatives (ABS & SAN).

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

Uses

Suitable for most point-of-sale and industrial uses on labels and stickers, keyboards, automotive, signprinting and printing onto reflective materials. The quality raw materials used make series 388 suitable for external use or where greater mechanical and chemical resistance is needed when used together with hardeners (e.g. series 600-HDA or series 600 HDR (external) or 600-HDI (internal)) at approx. 10% by weight. Hardener adhesive agent can cause "chapping" in extreme cases and a worsening of adhesion as a consequence.

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. The recommended solvent guarantees 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 thinners series 300-17 should give consistency of print and good working viscosity under normal circumstances. Rotary printing require thinning with series 300-019 at approx. 20-30% by weight. For more extreme conditions please refer to the technical leaflet "series 300 screen-printing additives" Care should be taken when using additives to ensure that stability is not compromised.

Colour shades

The 388 ink series is heavy metal free (Euronorm 71, part 3), monopigmented and suitable for matching to MS-colour mixing system.

Colours available:

388 – 1000	Lemon yellow
388 – 1100	Yellow (light)
388 – 1200	Yellow (reddish)
388 – 2000	Orange
388 – 3000	Carnation red
388 – 3100	Transparent red
388 – 3200	Transparent dark red
388 – 3300	Transparent magenta
388 – 4000	Transparent violet
388 – 5000	Transparent blue
388 – 6000	Transparent green
388 – 7000	Red / brown
388 – 8000	Mixing black
388 – 9000	Mixing white
388 – 0900	Ultramarine (non-fade properties)

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

For maximum mechanical & chemical resistance a blend of at least 20% by weight of binder 388-07 (OR -06, -05, -07) should be used.

Standard inks according to colourange ST
31 brightshades (shade 08-38)
9 fluorescent colours (shades 40-47)

Metallics:

388 – 100	Silver (rub proof)
388 – 101	Britannia silver
388 – 102	Light gold
388 – 103	Middle gold
388 – 105	Rich gold
388 – 106	Copper

Various inks can be made to customer specification, these include metal-free bronze as well as the ST recipes.

388 – 200 Pearl gloss silver

388 – 02299 Course silver

The following matt inks are standard to the range and the other basic colours can be made in matt on request

388 – 8000/MT matt black

388 – 9000/MT matt white

Trichromatic colours:

388 – 0950 Cyan

388 – 0960 Yellow

388 – 0970 Magenta

388 – 0980 Deep black

And blending pastes:

388 – 04 Extender base

388 – 06 Retarder Gel

388 – 07 Binder paste

To expand the special uses there are also different standard lacquers to choose from

388 – 05 gloss lacquer

388 – 05/MT Matt lacquer

If the inks in series 388 are for exterior use we recommend overprinting with a special lacquer from the series 85 – 5700 for best non-fade properties. Using this combination give unsurpassed results for a solvent based one component system.

All the above colours conform to EN71, Part 3 (safety of toys, migrations of various elements) and are heavy metal free. The inks all have a blue wool rating of 6-8 (DIN 16525) with the exception of fluorescent and ultramarine in the MS-Colour-system 0900 and care should be taken with white or clear lacquer discolouration under strong lighting conditions.

Drying

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

Meshes

The 388 series is suitable for use with all usual meshes and capillary films.

Cleaning

The 388 series can be cleaned down with most usual solvent based cleaners but Printcolor AG recommend 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)

MS – BASIC COLOURMATCH SYSTEM

Based on the MS base colours you can compile the following ink order

Series 388

MS-Series 388 + 20% of weight Series 388-07

Series 384 (previously Series 284!)

MS-Series 388 + 20% of weight Series 384-07

Series 386 (Previously Series 120!)

MS-Series 388 + 20% of weight Series 386-07

Series 387 (Previously Series 84!)

MS-Series 388 + 20% of weight Series 387-07

Series 395 (Previously Series 9500!)

MS-Series 388 + 20% of weight Series 395-07

The above information has been gathered through stringent laboratory tests and trials. Our technical advice is given to the best of our knowledge but we would recommend that customers always do their own trials for ink suitability due to the variable nature of production conditions and therefore lie outside our guarantee liabilities. Any use of non-recommended products or alien products are used at the customers own risk and releases Printcolor Screen AG from any further consequences.

Jun-02