

## Screen printing ink **SERIES 320**

For high speed screenprinting of industrial and decorative plastics

**A silk finish ink giving good coverage and mileage, suitable for interior or exterior use. Suitable for many graphic and industrial applications on various rigid plastic substrates using fast automatic printing.**

### Substrates

Suitable for a wide range 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, good results can be obtained on sheet polystyrene ABS, SAN etc. Care must be taken with softened materials, especially PVC as wax migration can occur in the substrate. Series 320 does not contain any PVC binding agents and so is more acceptable for recycling of print in packaging. 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, especially double-sided work, on labels and stickers, paper and carton decoration. The series 320 forms a relatively hard film layer so care must be taken of blade quality when kiss-cutting. The quality raw materials used make series 320 suitable for external use or where greater mechanical and chemical resistance is needed (especially resistance to alcohol) when used together with hardeners (e.g. series 600-HAD 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 in 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 screenprinting additives" Care should be taken when using additives to ensure that stability is not compromised.

### Colour shades

The 320 ink series is heavy metal free (Euronorm 71, part 3), monopigmented and suitable for matching to MS-colour mixing system.

### Colours available:

320 – 1000	Lemon yellow
320 – 1100	Yellow (light)
320 – 1200	Yellow (reddish)
320 – 2000	Orange
320 – 3000	Carnation red
320 – 3100	Transparent red
320 – 3200	Transparent dark red
320 – 3300	Transparent magenta
320 – 4000	Transparent violet
320 – 5000	Transparent blue
320 – 6000	Transparent green
320 – 7000	Red / brown
320 – 8000	Mixing black
320 – 9000	Mixing white
320 – 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.

### Standard inks according to colourange ST

31 brightshades (shade 08-38)  
9 fluorescent colours (shades 40-47)

### Metallics:

320 – 100	Silver (rub proof)
320 – 101	Britannia silver
320 – 102	Light gold
320 – 103	Middle gold
320 – 105	Rich gold
320 – 106	Copper

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

320 – 200 Pearl gloss silver  
320 – 02299 Course silver

The following matt inks are standard to the range and the other basic colours can be made in matt on request  
320 – 8000/MT matt black  
320 – 9000/MT matt white

Trichromatic colours:

320 – 0950 Cyan  
320 – 0960 Yellow  
320 – 0970 Magenta  
320 – 0980 Deep black

And blending pastes:

320 – 04 Extender base  
320 – 06 Retarder Gel  
320 – 07 Binder paste

To expand the special uses there are also different standard lacquers to choose from  
320 – 05 gloss lacquer  
320 – 05/MT matt lacquer

If the inks in series 320 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 EN 71, 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 320 series is suitable for use with all usual meshes and capillary films.

### Cleaning

The 320 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 )

### 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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