

Solvent-based screen printing ink for mirror, chrome, and metallic effects

Mirror effect ink for prints on the reverse side of transparent substrates

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Field of Application

Marachrome MC 295 is a solvent-based and press-ready screen printing ink for the manufacturing of mirror, chrome, and metallic effects. The mirror effect can only be achieved by printing onto the reverse side of a transparent substrate.

Print substrates

Transp. synthetic materials such as PMMA, polycarbonate (PC), PETA, primed PET foils, and glass can be printed onto. PETG can also be overprinted with MC 295 even if the mirror effect will slightly be inferior.

Since all the substrates mentioned may be different in printability within an individual type, preliminary trials are essential to determine suitability for the intended use, particularly for subsequent processing.

Field of use

Marachrome MC 295 is suited for the production of high-quality displays in sales and publicity areas (POP and POS displays), glass decoration as well as other indoor applications intended to imitate traditional mirror, chrome, or metallic effects.

For outdoor use, please refer to the chapter 'Fade resistance'.

MC 295 can also be applied with a spray-gun, preliminary trials are, however, essential. We recommend thinning with a suitable thinner such as the fast acting PLR or PSV, as well as filtering (25 µm screen) the thinned ink before use in order to eliminate bubbles in the ink film.

Characteristics

Processing

The mirror effect of the printed ink film largely depends on the quality and transparency of the substrate used, the care taken in processing, and the drying process. Special features of Marachrome MC are the very good screen opening and its mild odour. Before printing, the ink must be carefully stirred manually.

MC 295 Mirror Silver is very sensitive to contamination and reacts immediately resulting in a clouding of the mirror effect. Possible sources of failure in this respect are poorly cleaned screens or stencils, or dirty spatulas or stirrers.

The use of ancillaries such as flow additives or screen opening sprays is also critical and should be avoided. A clean working environment is essential.

With increased storing time, the ink will lose some of its mirror effect quality. Owing to this, shelf life of MC 295 is limited to one year if stored in an originally closed can. If once opened but closed again thoroughly, shelf life will amount to approx. 6 months.

Drying and printing speed

MC 295 mirror silver can be processed on semi- or three-quarter automatic machines, as well as manually. However, after tunnel drying (50-60°C), it must be placed on a drying rack as the block resistance (for immediate stack drying) is not adequate. A brighter mirror effect can be achieved by tunnel drying rather than by simple rack drying.

Marachrome MC



Opacity

On transparent substrates, Marachrome MC has a medium opacity which is further improved by using suitable blocking layers over the entire surface.

Fade resistance

Marachrome MC 295 is highly fade resistant and UV-stable. Currently, we do not yet have enough data concerning outdoor applications.

Yield

The values below are theoretical calculations:

35 sqm/500 g, fabric 120-34 (T)

25 sqm/500 g, fabric 90-48 (T)

Range

The following standard shades are available:

MC 295	Mirror Silver (500g)
LIG 073	Blocking Layer, black, for PC and PMMA, fabric 120-34
UVCD 980	Blocking Layer, black, for PC, UV-curable, fabric 140-31 (S)
P 980 + H1	2C Blocking Layer, black, for glass (140°C, 30min), PETG, PETA, PMMA, and PC, fabric 100-40 (T) (P980: Hardener H 1 = 8: 1)

For high mechanical and chemical resistance of the Mirror Silver, we recommend full surface overprinting with a blocking layer. If further metallic effects are required, the transparent shades of the ink series Marastar SR (PC, PETA, and PMMA) or Glass Ink GL (glass) can be pre-printed onto either the top or reverse side of the substrate.

Auxiliaries

PLR	Thinner for MC 295
PV	Thinner for blocking layers LIG 073 and P 980
PLR or PSV	Spray Thinner (add. approx. 100%)
PLR	Cleaner

The mirror ink is press-ready but, if necessary, to be thinned with 5-10% PLR. Screen, stencil, squeegee, and tools should be cleaned immediately after printing.

Fabrics and stencils

The best mirror effect will be obtained by using a new screen mesh of 90-48 (T) to 120-34 (T). The stencils must be solvent-resistant and thoroughly cured.

Labelling

For Marachrome MC Mirror Silver (FP >55°C) and UR3 Cleaner (FP > 40°C), there are current Material Safety Data sheets according to the EC directive 91/155 giving full details of all relevant safety data including labelling according to current dangerous substances legislation and EC directives. The health and safety data may also be obtained from the respective label. Please request the corresponding Material Safety Data Sheets. Since the ink is not considered to be a flammable liquid, any specific regulations for the handling of flammable liquids do not apply to the ink.

Note

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products or their suitability for each application.

You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for a specific application is exclusively your responsibility. Should, however, any liability claims arise, such claims shall be limited to the value of the goods delivered by us and utilised by you with respect to any and all damages not caused intentionally or by gross negligence.