
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 substrate

Transparent 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.

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, 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.

Mirror Ink 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 auxiliaries such as flow additives or screen opening sprays is also critical and should be avoided. A clean working environment is essential, and the use of a new, unused screen is recommended.

Drying and printing speed

Mirror Ink 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, Mirror Ink has a medium opacity which is further improved by using suitable blocking layers over the entire surface. Furthermore, blocking layers increase the mechanical and chemical resistance.

Fade resistance

Marachrome MC 295 is highly fade resistant and UV-stable. It is suitable for permanent outdoor exposure of 2 years if placed vertically, and referred to the middle European climate north of the forty-fifth degree of latitude.

Mileage

Calculated values below:

35 sqm/500 g, fabric 120-34

25 sqm/500 g, fabric 90-48

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
P 980 + H1	2C Blocking Layer, black, for glass (140°C, 30min), PETG, PETA, PMMA, and PC, fabric 100-40 (P980: Hardener H 1 = 8: 1)

If further metallic effects are required, the transparent shades of the ink series Glass Ink GL can be pre-printed onto either the top or reverse side of the substrate.

Upon request, there is also a Mirror Gold available (two components):

HM 695 700 127	Gold Paste, 500g Unit
HM 695 100 686	Binder, 800g Unit

The recommended mixing rate gold paste: binder is 4:6 (parts by weight). Pot life is approximately 8 h.

In order to achieve the best possible optical reflection it is essential to gradually add the specifically developed binder to the gold paste and stir homogeneously, very carefully. Disperse thoroughly until no lumps are left. Usually, wet-in-wet printing is recommended to achieve a homogeneous appearance and to increase opacity. Slow drying in the heat tunnel right after printing increases the degree of gloss. Prints should dry for 1 day in the rack before being overprinted with the blocking layer.

Auxiliaries

PLR	Thinner for Mirror Silver/Gold
PV	Thinner for blocking layers LIG 073 and P 980

The mirror ink Marachrome MC 295 is press-ready but, if necessary, to be thinned with 5-10% PLR. Screen, stencil, squeegee, and tools should be cleaned immediately after printing.

Cleaner

Cleaner PLR (flash point 12°C) can be used for manual cleaning of the screens /tools.

Fabrics and stencils

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

Recommended mesh count for Mirror Gold: 100-40.

Marachrome MC



Shelf life

With increased storing time, the ink will lose some of its mirror effect quality. Owing to this, shelf life of Mirror Silver/Gold 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.

Labelling

For Marachrome MC Mirror Silver and the auxiliaries there are current Material Safety Data Sheets according to EC regulation 1907/2006 available, 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.

Marachrome MC 295 has a flash point between 50°C and 100°C.

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.