

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

Mara® *Chrome* MC 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.

Substrates

Transparent synthetic materials such as PMMA, polycarbonate (PC), PETA, primed PET foils, and glass are suitable. PETG can also be overprinted with MC but the mirror effect will be slightly inferior.

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

Field of use

Mara® *Chrome* MC 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.

Mara® *Chrome* MC can also be processed with a spray gun, but preliminary trials are necessary for this process. In order to avoid surface irregularities, we recommend to filter the thinned ink (25 µm screen) before processing.

Characteristics

Recommendation

The ink should be stirred homogeneously before printing and if necessary during production.

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.

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

Mirror Ink Mara® *Chrome* MC 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.

Fade resistance

Mara® *Chrome* MC 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.

Stress resistance

Blocking layers increase the mechanical and chemical resistance. On transparent substrates, Mirror Ink MC has a medium opacity which is further improved by suitable blocking layers over the entire surface.



For blocking layers we recommend:

Mara® Poly P (2-comp. with Hardener H 1, mixing ratio ink:hardener 8:1) for

- Glass, PETG, PETA, PMMA, PC

Before and after printing the blocking layer, thorough drying is essential.

We recommend:

- tempering the printed mirror ink at 80 °C for 2-3 h and then
- drying the overprinted blocking layer immediately in the tunnel dryer

Range

Basic Shades

295 Mirror Silver

Auxiliaries

PSV	Thinner	0-5%
UR 4	Cleaner (flp. 52°C)	
PLR	Cleaner	

Mara® Chrome MC can be thinned with PSV if necessary.

During the **printing process** PLR must be used as cleaner.

Cleaner UR 4 is only recommended for the **final cleaning** of the working equipment.

Printing Parameters

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

Shelf Life

Shelf life depends very much on the formula/reactivity of the ink system as well as the storage temperature. It is 1 year for an unopened ink container if stored in a dark room at a temperature of 15-25 °C. Under different conditions, particularly higher storage temperatures, the shelf life is reduced. In such cases, the warranty given by Marabu expires.

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 nor 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 foregoing information is based on our experience and should not be used for specification purposes. All characteristics described in this Technical Data Sheet refer exclusively to the standard products listed under "Range", provided that they are processed in accordance with their intended use and only when used with the recommended auxiliaries. The selection and testing of the ink for specific applications is exclusively your responsibility. Should, however, any liability claims arise, they 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.

Labelling

For Mara® Chrome MC and its auxiliaries, there are current Material Safety Data Sheets available according to EC regulation 1907/2006, informing in detail about all relevant safety data including labelling according to EC regulation 1272/2008 (CLP regulation). Such health and safety data may also be derived from the respective label.