

For PVC self-adhesive films, soft and rigid PVC, polycarbonate, PETG, PETA, acrylics

Glossy, good opacity, fast drying, vacuum-formable, flexible

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Field of Application

Substrates

The Mara® Gloss GO screen printing ink is suited for

- rigid and soft PVC
- PVC self-adhesive films
- polycarbonate
- PETG and PETA (attention when printing white!)
- PMMA
- heavy-weight papers, pasteboard, cardboard, wood, and press-board

It is not suited for polystyrene.

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® Gloss GO is a universal and flexible ink type for a wide range of applications and substrates, suited for printing speeds of up to 600 prints/h.

Due to its high flexibility, GO is especially suited for injected substrates sensitive to cracking of the ink film as well as for formed parts. When printing onto soft PVC, the block resistance must be checked by preferably putting a silk paper between the prints.

All GO colour shades are best suited for the printing of PETG and PETA. For printing white onto PETG, we recommend to use GO 070 (no Opaque White GO 170, danger of crack initiation!); in the case of PETA, please use Maraflex FX 970 White instead of GO 070.

For colour matches to be printed on PETA and containing a percentage of white > 50%, it is to use FX 970 for the mixing with GO colour shades.

Attention: If Mara® Gloss GO is used for moulding and it is necessary to print a white shade, GO 070 White must be used (no Opaque White GO 170!).

GO 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

Ink Adjustment

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

Drying

Physically fast drying, ready for overprinting after 20-30 min at 20°C, stackable after 40 sec at 50°C in a tunnel dryer. The times mentioned vary according to the print substrate, ink film thickness, drying conditions and auxiliaries used. Generally an extended drying time is necessary when overprinting the ink.

Fade resistance

Pigments of excellent fade resistance are used for all Mara® Gloss GO shades.

Shades mixed by adding Printing Varnish GO 910, or other colour shades - especially white - mostly have a reduced fade and weather resistance. The fade resistance of the ink also decreases if the density of the printed ink film is reduced.

Mara® Gloss GO 170 Opaque White is not suited for outdoor use due to its high pigmentation. The pigments used are resistant to plasticizers and solvents.



Stress resistance

After proper and thorough drying, the ink film exhibits an outstanding adhesion as well as rub and scratch resistance. It is highly flexible and suitable for moulding (in the case of white, we recommend preliminary trials).

In the case of a higher demand for rub and abrasion resistance, especially for double-side printing when stacked, we recommend to over-varnish with Printing Varnish GO 910. As the ink film of Mara® Gloss GO has a thermoplastic characteristic, block resistance of heated print sheets when stacked is limited.

Range

Basic Shades

020	Lemon
021	Medium Yellow
022	Yellow Orange
026	Light Yellow
031	Scarlet Red
032	Carmine Red
033	Magenta
035	Bright Red
036	Vermilion
037	Purple Red
045	Dark Brown
055	Ultramarine Blue
056	Turquoise Blue
057	Brilliant Blue
058	Deep Blue
059	Royal Blue
064	Yellow Green
067	Grass Green
068	Brilliant Green
070	White
073	Black

High Opaque Shades

170	Opaque White
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Fluorescent Shades

320	Fluorescent Yellow
323	Fluorescent Orange
331	Fluorescent Red
333	Fluorescent Pink
364	Fluorescent Green

Further Products

910	Overprint Varnish
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Gloss and flexibility of GO 170 Opaque White is reduced due to the higher pigmentation.

Due to their high transparency, fluorescent shades must only be printed onto white surfaces. If necessary, a white layer must be printed prior to applying the fluorescent shade.

Fluorescent shades are very unstable if exposed to the sunlight and are, therefore, not suitable for outdoor use. A short-term outdoor resistance can be achieved either if two fluorescent shades are printed on top of each other or by over-varnishing, or mixing 5% of a basic shade into the fluorescent shade.

All shades are intermixable. Mixing with other ink types or auxiliaries must be avoided in order to maintain the special characteristics of this ink.

All basic shades are included in our Marabu-ColorFormulator (MCF). They build the basis for the calculation of individual colour matching formulas, as well as for shades of the common colour reference systems HKS®, PAN-TONE®, and RAL®. All formulas are stored in the Marabu-Color Manager software.

Metallics

Metallic Pastes

S 191	Silver	15-25%
S 192	Rich Pale Gold	15-25%
S 193	Rich Gold	15-25%
S 291	High Gloss Silver	10-20%
S 292	High Gloss Rich Pale Gold	10-20%
S 293	High Gloss Rich Gold	10-20%

Metallic Powders

S 181	Aluminium	17%
S 182	Rich Pale Gold	25%
S 183	Rich Gold	25%
S 184	Pale Gold	25%
S 186	Copper	33%
S 190	Aluminium, rub-resistant	12.5%

These metallics are to be added to GO 910 in the recommended amount, whereat the addition may be individually adjusted to the respective application. We recommend preparing a



mixture which can be processed within a maximum of 8 h since metallic mixtures usually cannot be stored. Due to their chemical structure, the processing time of mixtures with Pale Gold S 184 and Copper S 186 is even reduced to 4 h.

Owing to the smaller pigment size of Metallic Pastes it is possible to work with finer fabrics like 140-31 to 150-31.

Owing to the bigger pigment size of Metallic Powders we recommend the use of a coarser fabric like 100-40.

Shades made of Metallic Powders are always subject to an increased dry abrasion which can only be reduced by overvarnishing.

All metallic shades are displayed in the Marabu "Screen Printing Metallics" colour chart.

Auxiliaries

QNV	Thinner	10-15%
ABM	Matting Base	5-20%
WM1	Plasticizer	2-5%
MP	Matting Powder	2-4%
ES	Printing Modifier	0.5-1%
VP	Retarder Paste	0-20%
UR 3	Cleaner (flp. 42°C)	
UR 4	Cleaner (flp. 52°C)	
UR 5	Cleaner (flp. 72°C)	
SV 1	Retarder	
SV 9	Retarder, slow	
7037	Spray Thinner	
ST 1	Extender Base	

Thinner is added to the ink to adjust the printing viscosity. For slow printing sequences and fine motifs, it may be necessary to add retarder or retarder paste to the thinner. For an additional thinning of the ink containing retarder, only pure thinner should be used. For spray coating, fast Spray Thinner 7037 should be used (on parts sensitive to tension cracks, preliminary trials are essential).

Plasticizer WM 1 is recommended if high flexibility is required from the printed ink film. This is important for thin substrates with a natural tendency to roll, as well as for applications involving cutting or die-cutting of the printed surface. The use of Plasticizer WM 1 reduces the drying speed.

The degree of gloss can be reduced by adding Matting Paste ABM or Matting Powder MP (2% max. for GO 070 and 170), decreasing the opacity at the same time.

Printing Modifier ES contains silicone and can be used to rectify flow problems on critical substrates. If an excessive amount is added, flow problems are increased and adhesion may be reduced, especially when overprinting.

The cleaners UR 3 and UR 4 are recommended for manual cleaning of the working equipment. Cleaner UR 5 is recommended for manual or automatic cleaning of the working equipment.

Printing Parameters

All types of commercially available fabrics and solvent-resistant stencils can be used.

Shelf Life

Shelf life depends very much on the formula/reactivity of the ink system as well as the storage temperature. The shelf life for an unopened ink container if stored in a dark room at a temperature of 15 - 25 °C is:

- 2 years for fluorescent shades 320 - 364
- 3.5 years for all other standard products

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

Mara® Gloss GO



our experience and should not be used for specification purposes.

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® Gloss GO 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.

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