

# Screen Printing Inks

Expertise for Individual Solutions



Marabu



Marabu

## Marabu – Competence in Colour

From the early days of screen printing, Marabu has actively supported this innovative technology, not only in the German market but also abroad. In constant dialogue with the users and their continuous new ideas and demands, Marabu has intensively promoted the development of screen printing through its own innovative products and application techniques.

Today, Marabu is a worldwide known brand with high-quality printing inks having successfully been established thanks to the numerous distribution partners and subsidiaries in approximately 70 countries.

“Competence in Colour” stands as the result of many years of intensive work but also for a permanent challenge to offer technologically high-class, application-friendly products by innovative and continuous development now and in the future.

The fast growing importance of new ink technologies such as UV-curable systems, taking into consideration the rising environmental consciousness, represents a special task for us. In many fields of use, these systems allow important increases in quality and productivity through quicker curing and constant, reproducible production processes.

## Responsibility for People and Environment

Marabu is certified through the Quality Management Systems DIN EN ISO 9001 and DIN EN ISO 14001. For Marabu it is decisive that quality is not only expected but part of our daily routine. The certification is understood as a continuing process leading to further improvements within the company, optimizing our products as well as our service. To protect the user from possible health risks, one of Marabu’s main targets is to do without particularly harmful materials and to replace them – wherever technically feasible – with materials free of hazard symbols.

## Contents Industrial Screen Printing

Screen printing has become widely used in many industrial plants over the past years where finished products or parts are decorated or printed. The customers demand perfect solutions according to clearly defined requirements, strict quality control as per international standards, or their own QM guidelines.

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## Graphic Screen Printing

Individual print products are produced to order in specialized screen printing shops. The extremely large range of substrates demands a great deal of expert knowledge, experience, flexibility, and innovative ideas. With its vast range of ink systems, Marabu offers a solution for virtually every printing requirement.

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## Ink Characteristics Table

A removable Ink Characteristics Table with a comprehensive table of substrates is enclosed in this brochure.



ISO-Certification according to DIN EN ISO 9001 and DIN EN ISO 14001

**Signs and Information Systems** are long-lasting and weatherproof! Sign boards and promotional or traffic signs are just as typical for screen printing as dials on measuring and household appliances.

Signs and scales – there is a variety of demands as to adhesion and resistance which are to be fulfilled by screen printing inks.

Mostly, signs are long-lasting products made of wet or powder-coated metals, aluminium, high-quality films, or weather-resistant plastics. For scales and front panels, acrylics, polycarbonate, or ABS are mostly used.

**The Marabu Range:**

**Marapol PY**

- high gloss and high opacity
- flexible ink film
- good resistance for outdoor use
- especially suited for pre-treated plastics – PE, PP, rigid PVC
- by adding hardener, also suitable for varnished and powder-coated metals

**Marastar SR**

- solvent-based 1-component ink, high gloss
- very fast drying, high block resistance
- flexible for die-cutting, cutting, drilling and bending
- for printing onto scales made of plastic
- by adding hardener, the chemical resistance can be improved



**Why are Marabu Inks particularly suitable?**

- good UV resistance for long-term outdoor use
- good resistance to chemicals and environmental influences
- good mechanical resistance to common daily use and vandalism
- flexible ink film for motifs which are die-cut or cut into
- opaque and brilliant inks for a good optical impression
- colour shades for traffic signs according to DIN 6171 and 67520

**Marapur PU**

- solvent based 2-component ink, high gloss
- best possible chemical resistance
- very good fade and weather resistance
- for signs made of pre-treated plastics – PE, PP, and metals

**Marapur PU for traffic signs**

- according to DIN 6171 and 67520
- for reflective foils

**Marapoly P**

- solvent based 2-component ink, high gloss
- high opacity and fast drying
- very good fade and weather resistance
- wide field of use on plastics and metals

**Special Ink 3047**

- specifically designed for transparent front panels of PMMA or PC
- high opacity and non-yellowing white
- best possible chemical resistance, also with steam test
- avoids tension crazing on injected plastics
- to be used as 1- or 2-component ink

**Ultraplus UVP**

- quick UV curing
- high gloss
- very good chemical and mechanical resistance
- to be used as 1- or 2-component ink
- Printing of finest scales on plastics and metals

**Backlit Signage** · Light boxes draw attention day and night and are continually exposed to weather influences. Highest demands of robustness and durability are to be met.

Light boxes of PMMA, PETG, or PC can be printed with high-opaque colour shades, then vacuum formed. This is especially for the decoration and marking of backlit signage as essential design elements.

**Why are Marabu Inks particularly suitable?**

- high flexibility of basic and 4-colour process shades, suitable for vacuum forming
- highly fade-resistant colour shades for long-term outdoor use
- high-opaque to brilliant shades for backlit technique



**The Marabu Range:**

**Libraspeed LIS**

- solvent-based ink system
- fast drying and block resistance
- very flexible ink, vacuum formable
- for front or reverse side printing

**Labels** · Whether transparent designs for a 'No-Label-Look' or individual labels for high-quality brands requiring a high chemical resistance: Within the modern exchange of goods, labels save from confusion, provide safety indications, explain dosage all while providing an attractive optical appearance.

In this market segment, UV ink systems have gained wide acceptance, in particular due to their cure speeds. Special effects such as fluorescent and pearlescent shades or metallics, as well as safety codifications are an exceptional strength of screen printing.

**Ultragraph UVAR**

- UV-ink for roll-to-roll flat screen presses
- satin-gloss and brilliant colour shades
- die-cutting and cutting of the ink film possible
- compatible with hot foil stamping
- very versatile, flexible UV-ink for coated PE, PP, PVC, and PET foils



**Why are Marabu Inks particularly suitable?**

- high opacity, important for labeling onto dark substrates
- high-gloss or matt – an attractive contrast
- good resistance to mechanical stress and fill goods
- increased production speed, in particular due to the use of rotary screen printing
- can be combined with other printing processes such as offset and letterpress or flexography

**The Marabu Range:**

**UltraRotaScreen UVRS**

- UV ink for rotary screen printing
- highly reactive for high printing speeds
- overprintable with letterpress, offset, and flexo inks as well as hot foil stamping
- good adhesion to all commercial substrates

**Ultrastar-M UVSM**

- UV-ink for roll-to-roll flat screen presses
- matt ink surface
- interesting graphic effects in combination with the high-gloss ink UVAR
- die-cutting and cutting of the ink film possible
- for coated PE, PP, PVC, and PET foils

**Marastar SR**

- solvent-based ink with high opacity
- flexible ink for a trouble-free die-cutting and cutting of the ink film
- very good fade and weather resistance
- glossy, fast drying ink for coated PE, PP, PVC, and PET foils with a wide colour range





**Membrane Switches** are indispensable owing to their versatile application possibilities. The engineering and manufacture of electronic parts demand resistance, flexibility, and graphic creativity.



Membrane switches excel due to their space-saving and compact construction, safe function, and last but not least by insensitivity to humidity and soiling. The boundless design possibilities are a further consideration.

#### Why are Marabu Inks particularly suitable?

- high opacity for a fully opaque print
- very good adhesion to polycarbonate or coated polyester
- good adhesion and compatibility with adhesives
- very high flexibility of the printed ink film, capable of millions of accuations
- easy handling

#### The Marabu Range:

##### Maraswitch MSW

- excellent flexibility
- very high peel values of the adhered printed foil to the base plate
- optimized opacity of the blocking layers
- very high-opaque basic shades complementing System Maracolor
- no cracking of the ink layers when testing the ink's peel strength or adhesion

##### Marastar SR

- high flexibility
- excellent adhesion between the various layers
- vast colour range including transparent shades

## Automotive and Inmould Technology

Not only the growing design requirements in the automotive field but also strong quality and safety regulations call for extremely high standards for the print process and specifically screen printing inks.

Components for instrument panels such as speedometer dials, switches, and operating elements become increasingly sophisticated with top illumination and transillumination. Shape and colour result in a perfect combination of functionality and optics.

#### Why are Marabu Inks particularly suitable?

- good resistance to abrasion, hand perspiration, and cleaning agents such as cockpit spray
- light-tight, high resistance to special tests such as environmental chamber and salt spray
- completely light-proof eliminating light leaks with transillumination technique
- ink systems for the inmould process (IMD) have particularly good adhesion properties onto polycarbonate and PMMA
- suitable for direct injection
- high temperature resistance

#### Ultraplus UVP

- UV-curable and block resistance
- very high chemical resistance
- excellent resistance to abrasion

#### The Marabu Range for IMD:

##### Maramold MPC

- for IMD second surface processing
- particularly good adhesion onto polycarbonate
- high temperature resistance
- can be used with Hardener H1 for higher wash-out resistance
- excellent formability

##### Maramold MACR

- for IMD second surface processing
- particularly good adhesion onto PMMA
- high temperature resistance
- excellent formability
- climate chamber compatibility



#### The Marabu Range for Automotive:

##### Libramatt LIM

- high opacity
- very good printability
- resistant to environmental chamber test

##### Marastar SR

- high chemical and mechanical resistances
- very fast drying
- high fade resistance

#### UV Varnishes

- For designing surfaces; UV-curable glossy, matt, as well as structured varnishes are available



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**Optical Disc** · One solution, any format! The Optical Disc has established itself worldwide as music and video carrier and storage medium. Screen printing onto Optical Discs requires a high quality of the ink system.

Printing, and accordingly the quality of the ink used for screen printing, must meet the highest technical requirements in this demanding and versatile market. The Marabu Ink Systems today have a top position in the modern Optical Disc market and also fulfil the demands of future generations.

**Why are Marabu Inks particularly suitable?**

**The Marabu Range:**

**Ultradisc UVOD**

- Optimally suited for printing machines of up to 135 units/min
- excellent combination with waterless offset printing
- extremely low radial deviation values of 0.05 – 0.3
- smallest possible interaction between ink and information carrying layer

**Recordable und Rewritable Optical Discs**

**CD-R/RW and DVD ± R/RW**

Varnishes and colour concentrates are typical for this field of application



**Pre-recorded Optical Discs CD/DVD**

A great variety of decoration possibilities are used in this "field" such as:

- A package of opaque white shades for different requirements
- spot colours according to Colour Reference Systems like PMS, HKS
- picture discs with high-resolution photos are realized with waterless offset in combination with screen printing inks, resp. brilliant 4-colour process shades
- metallic and PMS shades, as well, fluorescent shades and matt/glossy effects create a boundless variety

- excellent environmental chamber values
- very good handling thanks to a modern rheology
- PMS colour formulations adjusted to the CD/DVD surface

**Product Range**

- Several opaque white shades
- 13 basic shades according to System Ultracolor
- 3 4-colour process sets meeting varying customer demands

**The Marabu Range:**

**Ultradisc CD-R Match**

- innumerable possibilities of creating colour effects with the CD-R Match package
- very good handling thanks to modern rheology
- working out of special colour matches with transparent shades on demand
- excellent environmental chamber values

**Product Range**

- CD-R Match, consisting of 4 different varnishes and 6 colour concentrates for achieving effective contrasts
- overprintable varnishes for inkjet and thermal transfer printers
- further UVOD products (basic shades, 4-colour process shades, black, white)



**Container Printing** · The multi-faceted segment! Direct screen printing onto bottles of PE or PP, polyester or PC guarantees a high-quality image and strengthens the distinctive character of each product.

## Colour Management Systems

### Marabu-ColorDispenser MCD

- fully automatic ink dispenser
- 14 to optionally 22 ink tanks
- automatic dispensing based on bar code laser

### Common features

- easy tank filling without the use of any tools
- safety lock on the tanks



- suggested when dispensing more than 25 times/day

### Marabu-ColorDispenser MCD Compact

- compact construction
- 14 ink tanks
- user-friendly maintenance
- semi-automatic operation
- suggested when dispensing more than 10 times/day

- dispensing precision < 0.1 gram
- run by the Marabu-Color-Manager MCM
- environmental-friendly reuse of the containers

Especially in OD manufacturing with its fast changing demands and various colour shades, these dispensers are an excellent solution for a fast, economical, and repeatable colour matching.



Common container packagings such as bottles and tubes differ in form and size, in their substrate, proper colouring of their material, and last but not least in the required flexibility.

### Why are Marabu Inks particularly suitable?

- excellent adhesion to a variety of materials
- high opacity of the printed motifs, particularly important for dark coloured bottles or fill goods
- high gloss of the ink for an attractive optical appearance
- very good abrasion and chemical resistance to all types of fill goods
- a sufficient pre-treatment of the surface by flaming is important for substrates made of polyolefines (PE, PP)

### The Marabu Range:

#### Ultrapack UVPOR

- well-adjusted viscosity avoids ink dripping through the screen
- wide substrate range (PE, PP, PET, PC, PVC)
- surface tension as low as 44 mN/m

#### Ultrapack UVPK

- up to 100 units/min
- highly reactive, flexible ink film

#### Ultrapack UVK

- up to 75 units/min
- surface tension from 48 mN/m
- medium viscosity

#### Ultraplus UVP

- polystyrene PS

#### Maraprop PP

- solvent-based ink
- suitable for untreated PP

**Bottle Crates** for food or beverages with eye-catching, original prints for individual presentation have become an important promotional medium. Screen printing, a long-lasting success in this field.

Bottle crates and transport containers of PE or PP often have a long lifetime and are subject to high chemical and mechanical stress during this period of time, e.g. when they are cleaned, transported, and frequently handled roughly. There are additionally often extreme climatic conditions.

#### The Marabu Range:

##### Marapoly P

- very good fade and weather resistance
- fast drying, important for multi-coloured print motifs
- extended pot life up to 12 hours
- high-gloss, solvent-based 2-component ink with an optimum of brilliance and opacity



#### Why are Marabu Inks particularly suitable?

- high-gloss and high-opaque colour shades, also suited for printing onto dark coloured bottle crates, a wide range of metallic shades and finenesses possible
- high chemical and mechanical resistance for a lengthy crate life-cycle
- good fade resistance for an intermediate outdoor storing of the crate

##### Marapoxy Y

- very high opacity
- very long pot life up to 24 hours
- very easy handling and processing
- good adhesion also onto difficult substrates (very high regrind percentage)
- high-gloss, solvent-based 2-component ink with decades of global success in most difficult conditions

##### Marapur PU

- very good chemical resistance
- very stable and resistant metallic range

**Glass** stands for stability, aesthetic, and design. A versatile material with extraordinary glossy features. Glass appears in nearly all markets – accompanied by innovative ink trends offering new windows of opportunity.

Whether the impetus is design freedom, cost savings, or environmentally based, new solutions for glass decoration are being sought. These features apply particularly to bottles, drinking glasses, and small cosmetic bottles. Decorated flat glass for indoor application is gaining importance.

#### Why are Marabu Inks particularly suitable?

- suited for container glass, restaurant glass, and indoor flat glass
- heavy metal-free formulation
- enormous energy savings through significantly faster curing processes
- time savings through faster processing
- nearly unlimited colour range according to common colour reference systems
- brilliant and 4-colour shades

#### The Marabu Range:

##### UV-curable screen printing ink Ultraglass UVGO

- brilliant, high-gloss colour shades
- immediate drying
- suited for high printing speeds
- very good adhesion and scratch resistance to coated or uncoated glass
- excellent dish washer resistance (> 400 cycles)
- very good alkaline and chemical resistance (sterilization, perfumes, alcohol, detergents)

##### Solvent-based screen printing ink Glass Ink GL

- high opacity
- very good dish washer resistance
- good adhesion and scratch resistance
- good alkaline and chemical resistance (sterilization, perfumes, alcohol, detergents)







always

Coca-Cola

Siempre

Savanna

DRY

PREMIUM CIDER

100%

0.1% alc/vol



## Fleetmarking and Tarpaulin Decoration

Mobile advertisements attract attention and send the right signal! A flexible solution to weather the seasons!

For complete vehicle decorations, individual designs, and multi-coloured elements, high-quality inks are used to achieve durable and irresistible results. Images printed with basic or 4-colour process shades allow impressive dimensions up to full-area decorations of busses, trains, and taxis. Typical is the extraordinary resistance for outdoor use.

### Why are Marabu Inks particularly suitable?

- longevity and maximum fade resistance for outdoor use
- high flexibility of the printed ink film, also over beads and rivets
- good plasticizer and temperature resistance in changing seasons and climatic zones
- best mechanical resistance for daily use in the event of high winds during travelling

- very good chemical and mechanical resistance to stress in car-wash plants, to detergents, graffiti removers, and environmental influences such as e.g. diesel soot
- compatible with application tapes
- lowest possible influence of the ink on elasticity and adhesion of the foil

### The Marabu Range for self-adhesives:

#### Ultraform UVFM

- UV-curable ink system
- very high flexibility of the printed ink film
- very stable tonal values for longer print runs, important for prints consisting of several parts
- high fade-resistant pigmentation



### Marastar SR

- solvent-based ink system
- very high flexibility of the printed ink film
- successful in the printing of car decoration stripes for many years
- high fade-resistant pigmentation
- particularly suited for applying self-adhesives onto tarpaulins

### The Marabu Range for tarpaulins:

#### Maraplan PL

- high flexibility and plasticizer resistance
- low viscosity for a good ink flow when rolled or sprayed, press-ready adjusted for screen printing
- satin-gloss, solvent-based ink series, particularly developed for direct printing onto tarpaulins, 13 high-opaque basic shades available
- no tendency to block

**Other Industrial Applications** · Screen printing is durable and boundless! No idea, no pattern which cannot be reproduced in screen printing!

Screen printing starts where other print processes reach their limits! Whether glass, metals, paper, plastics or fabrics, screen printing makes the best of it.

### Sporting Goods

The field of sporting goods is very comprehensive yet, individual so that each project must be looked at and worked on separately. Whether a high demand for mechanical and chemical resistance, a request for high opacity or gloss, or a large colour range with very different colour effects, screen solutions dominate.

### Textile Printing

The list of textiles being printed ranges from material used for blinds and sunshades, to sports bags, racket sleeves, T-shirts, and casual clothing.

Maraflo TK is particularly suited for printing onto polyamide and polyester with a long-term outdoor use.

### Electrical and Household Appliances

The high requirements for resistance to chemical stress, high temperatures, steam, and daily wear and tear are decisive for this field. According to the different demands, 1- and 2-component solvent-based inks or UV-curable inks systems are available.



### Toys

Another very large field with different substrates and demands from the market. Most important for this application, however, is the compliance to DIN EN 71, part 3, a strength and focus of Marabu's inks for years. Furthermore, Marabu inks are also perspiration and saliva resistant; a best possible chemical and mechanical resistance is guaranteed.



## Advertising and Promotional Material

must be original, economical, and representative! The more the demands and substrates for promotional material differ – the greater the variety of inks offered in the Marabu range. Choose as per your individual requirements.



“The Colorful World of Publicity” – with Marabu. On paper and all kinds of plastics for posters, displays, advertisements and direction signs, stickers, promotional gifts, and many more.

### Why are Marabu Inks particularly suitable?

- good resistance
- ink systems with mild odour
- Jet inks with high block resistance
- inks for crack-sensitive substrates
- inks with best printability and mesh opening
- flexible ink systems

### The Marabu Range:

#### Posters and Banners

Large-sized prints for indoor and outdoor use

##### Ultragraph UVAR

- UV-curable and glossy ink system for indoor and outdoor applications
- very wide substrate range
- flexible

##### Ultragraph UVGR

- UV-curable and glossy ink system for long-term indoor use and short-term outdoor applications
- extremely suitable for multi-colour lines

##### Libraprint LIP

- Mild, solvent-based ink, fast drying and high block resistance

##### Maragraph GR

- Paper ink, fast drying and highly block-resistant, low odour.

##### Libramatt LIM

- Matt, solvent-based ink with very good mesh opening and printability

##### Libragloss LIG

- Solvent-based ink formulated with very low odour.

#### Displays

Promotional sales products for indoor and outdoor use combined with a great variety of substrates.

##### Ultraform UVFM

- glossy and highly flexible UV-curable ink with high-quality pigmentation
- extremely wide substrate range
- vacuum formability
- suitable for outdoor applications

##### Ultragraph UVAR

- UV-curable and glossy ink system for indoor and outdoor use
- wide substrate range

##### Ultragraph UVGR

- UV-curable and glossy ink system for indoor and short-term outdoor use
- high chemical resistance

##### Libraspeed LIS

- solvent-based ink, very fast curing
- best block resistance, especially on PS

##### Marastar SR

- 1- or 2-component solvent-based ink, resistant to petrol and alcohol after sufficient curing
- Fade resistant, the chemical resistance can be increased by overvarnishing with the 2-component Varnish P 910 of the Marapoly P Ink Series

#### Stickers

Signage, labels, inscription, etc.

##### Ultragraph UVAR

- UV-curable and glossy ink system for indoor and outdoor use
- wide substrate range
- good flexibility

##### Ultragraph UVGR

- UV-curable and glossy ink system for indoor and short-term outdoor use
- suitable for multi-colour lines
- wide substrate range



##### Libraspeed LIS

- best suited for PS, also for reverse printing

##### Marastar SR

- universal ink for nearly all substrates

##### Maraspeed SL

- fast drying and block resistant, also suited for PS

##### Libraprint LIP

- fast drying, also for 4-colour process shades

##### Libramatt LIM

- matt ink with excellent printability

##### Libragloss LIG

- best suited for injected parts made of PS or PMMA.

#### Ring Binders

Files, folders, presentation articles and many more

##### Ultragraph UVAR

- for pre-treated PP sheeting
- good flexibility

##### Maraprop PP

- for polypropylene PP
- very good adhesion, also on untreated PP
- very flexible and bending resistance
- fast drying, solvent-based 1-component ink

##### Marasoft MS

- for soft PVC
- very good gloss and high-opaque colour shades, also for dark substrates
- weldable black
- solvent-based ink, also 4-colour process shades available

##### Ultraflex UVF

- for soft PVC
- fast curing UV-ink
- high block resistance
- glossy, limited weldability





Auto  
Fresh Aqua

Starate Range  
Ultraform UVFM

PVC

PS

PC Paper  
PET PP

**Marabu Colourimetry** · Graphic and product designers have highest requirements for an exact match of their carefully chosen colour shades. Marabu offers specific working aids for a precise reproduction and quality assurance.



## Marabu-ColorFormulator MCF

**A colour formulation system with maximum technology and minimum expenditure**

This perfect colourimetric system allows you to calculate colour formulas for any original colour copy. MCF works either with a portable hand-held or a stationary spectrophotometer as



## Marabu-ColorManager MCM

**The versatile software for your formula administration!**

It has never been so easy to get precise colour matches as with this efficient and user-friendly software.

The comprehensive data bank contains mixing formulas for PANTONE®, HKS®, and RAL® Ink Systems.

You can easily:

- call up mixing formulas immediately and calculate them for any quantity
- calculate the ink consumption for the respective print job
- save and administrate your own mixing formulas
- weigh directly each mixing formula via a scale connected to the Marabu-ColorManager

well as with a software and data bank especially conceived for screen and pad printing.

With the Marabu-ColorFormulator MCF you can:

- measure the colour copy
- define the substrate, ink layer thickness, opacity, and the desired basic shades
- calculate a mixing formula
- optimize the formula using the correction program, if necessary
- systematically and objectively control the colour match of prints in series production

**Optimally pigmented basic shades are the key for perfectly matching PANTONE®\* and HKS®\*\* shades**

Pantone, Inc. is a global leader offering colour systems and modern technologies for colour choice and communication. Their brand name is known at designers, manufacturers, traders, and customers all over the world. Pantone has specialised in its colour technology to the graphics and design branch, as well as to publishing and printing, textile and synthetics industries.

Through a license agreement with PANTONE®, Marabu offers 9 PANTONE® basic shades in the ink series

**Marastar SR, Libragloss LIG, and Libraspeed LIS.** The special pigmentation of these inks offers a best premise to match the PANTONE® shades.

For a best possible colour match of the HKS® K range, Marabu has formulated the classic 88 HKS® K colour shades specifically to screen printing.

4 special HKS basic shades were developed in the ink series **Marastar SR** and **Libraspeed LIS**. By mixing them with 13 well-known 'System 21' basic shades, the complete HKS® K colour range can be achieved. The matching formulas are found in every HKS® K colour fan.



\*PANTONE® is Pantone Inc.'s check standard trademark for colour reproductions, colour matches, and colour matching materials.

\*\*HKS® is a registered trademark of HKS (Hostmann-Steinberger, K+E, Schmincke) Warenzeichenverband e.V.





Old Trial	Diff
L*	57.98 57.28 -0.70
a*	-41.9 -42.5 -0.60
b*	-39.4 -38.5 0.90





**Marabu Ink Systems** · Specifically selected and optimally pigmented basic shades are the solution for an almost unlimited range of brilliant mixing shades – without abandoning the highest possible opacity.

Existing colour reference systems such as e.g. PANTONE®\* and HKS®\*\* are often used for the design of printing motifs. As these colour patterns were originally developed for different printing processes like offset or for coating, it is often difficult to reproduce them in screen printing.

The brilliance and transparency of many PANTONE® shades can only be achieved if accordingly brilliant and luminous basic shades are available for mixing. Through a license agreement with PANTONE®, Marabu offers 9 special PANTONE® basic shades in the ink series Marastar SR, Libragloss LIG, and Libraspeed LIS. The special pigmentation of these inks offers a best premise to match the PANTONE® shades.

For a best possible reproduction of the HKS® colour range in screen printing, Marabu has developed four special HKS® basic shades in the ink series Marastar SR and Libraspeed LIS.

#### Main Characteristics

In order to maximize opacity and brilliance of its colour shades, Marabu developed the "System 21" colour range some years ago, emphasizing above all the high opacity of shades. Many ink types are still supplied in these shades. Since then, colour shades per PANTONE® and HKS® have become more successful in design; the demand for brilliance more and more important. To meet this requirement, Marabu has developed a new colour system with brilliant colour shades together with utmost opacity: **System Maracolor** for solvent-based ink types – **System Ultracolor** for UV-curable ink types.



#### Product Range

In the enclosed Ink Characteristics Table you will find details showing the colour system related to each ink type. Please ask your Marabu distributor for the corresponding colour cards.

#### System Maracolor

This colour range for solvent-based ink types includes 17 intermixable basic shades. The combination of brilliant and opaque shades ensure an optimal reproduction of practically any popular reference system for colour design.

System Maracolor applies to all new ink series. Some of our earlier series have been changed to the new colour system.

#### System Ultracolor

This system is designed for UV-curable ink types. For technical reasons, they are partly formulated with pigments other than Maracolor and are monopigmented to facilitate UV-curing.

Therefore, we have restricted the new product range for UV inks to a selection of only 13 basic shades. These are marked with a <sup>UV</sup> after the shade

designation in the colour chart presented on this page. These inks are also intermixable and reflect in every respect the current high technical standards of the industry.

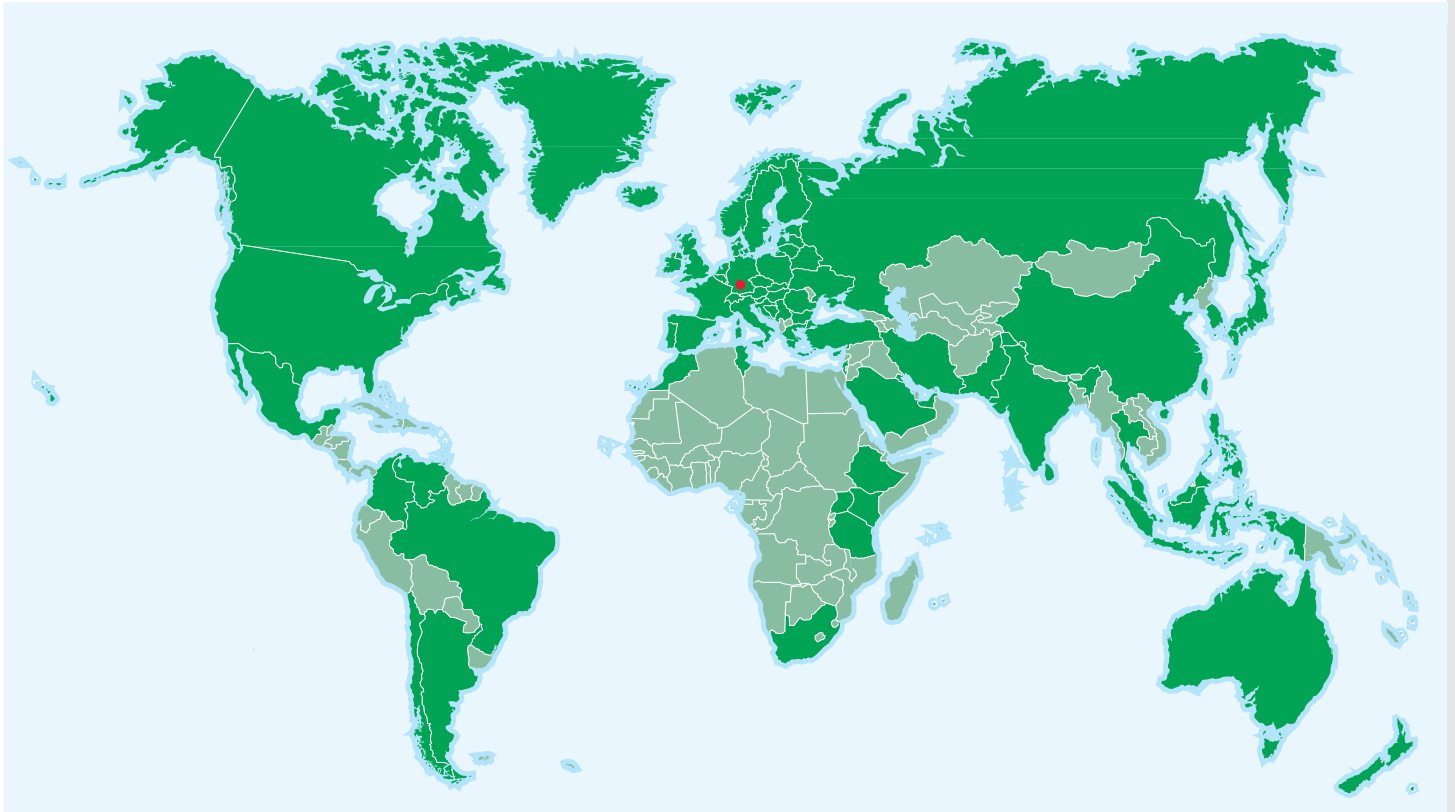
#### Additional special shades:

- high-opaque colour shades
- opaque white and black
- press-ready metallics
- high-gloss metallics
- 4-colour process shades
- transparent shades
- special effect colours

	920 Lemon
	922 Light Yellow <sup>UV</sup>
	924 Medium Yellow <sup>UV</sup>
	926 Orange <sup>UV</sup>
	930 Vermilion
	932 Scarlet Red <sup>UV</sup>
	934 Carmine Red <sup>UV</sup>
	936 Magenta <sup>UV</sup>
	950 Violet <sup>UV</sup>
	952 Ultramarine Blue <sup>UV</sup>
	954 Medium Blue
	956 Brilliant Blue <sup>UV</sup>
	960 Blue Green <sup>UV</sup>
	962 Grass Green <sup>UV</sup>
	940 Brown
	980 Black <sup>UV</sup>
	970 White <sup>UV</sup>



**Marabu Distribution Partners** · Qualified Distribution Partners and Subsidiaries offer each customer competent expert advice on site – a complete product range as well as comprehensive services worldwide.



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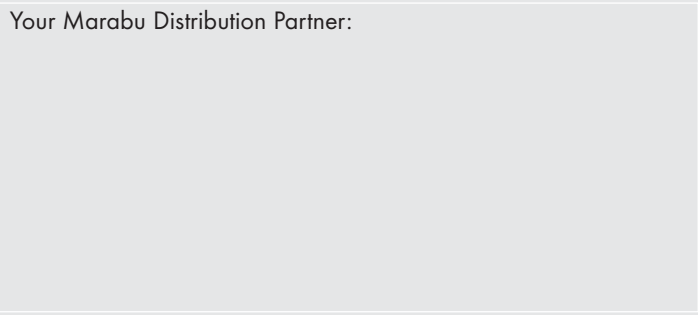
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Your Marabu Distribution Partner:





# Marabu Screen Printing Inks

## Ink Characteristics Table

### Table of Substrates



Product information											Product information											Product information												
Maraflex FX	Glass Ink GL	Maragloss GO	Maragraph GR	Libragloss LIG	Libramatt LIM	Libraprint LIP	Libraspeed LIS	Maramold MACR	Maramold MPC		Marapoly P	Maraplan PL	Maraprop PP	Marapur PU	Marapol PY	Marastar SR	Marafloor TK	Texacool TXC	Ultragraph UVAR	Ultraflex UVF		Ultraform UVFM	Ultraglass UVGO	Ultragraph UVGR	Ultradisc UVOD	Ultraplus UVP	Ultrapack UVPK	Ultrapack UVPOR	UltraRotaScreen UVRS	Ultrastar UVS	Ultrastar-M UVSM			
<b>Ink system</b>	Solv. 1C	Solv. 2C	Solv. 1C	Solv. 1C	Solv. 1C	Solv. 1C	Solv. 1C	Solv. 1C	Solv. 1C or 2C		<b>Ink system</b>	Solv. 2C	Solv. 1C	Solv. 1C	Solv. 2C	Solv. 1C or 2C	Solv. 1C or 2C	Solv. 2C	Aqueous 2C	UV	UV		<b>Ink system</b>	UV	UV 2C	UV	UV	UV	UV	UV	UV	UV	UV	
<b>Drying</b>	fast	medium	fast	very fast	fast	fast	very fast	fast	fast		<b>Drying</b>	medium	fast	medium	medium	medium	very fast	fast	fast	fast	fast	fast		<b>Drying</b>	fast	very fast	very fast	very fast	fast	very fast	fast	fast	fast	fast
<b>Degree of gloss</b>	satin	satin	glossy	satin	glossy	mat	glossy	glossy	glossy		<b>Degree of gloss</b>	high gloss	satin	satin	high gloss	high gloss	high gloss	mat	mat	glossy	glossy		<b>Degree of gloss</b>	glossy	high gloss	glossy	high gloss	high gloss	high gloss	high gloss	high gloss	high gloss	mat	mat
<b>Opacity</b>	medium	excellent	excellent	medium	medium	excellent	medium	medium	medium		<b>Opacity</b>	excellent	excellent	medium	excellent	excellent	excellent	excellent	excellent	medium	medium		<b>Opacity</b>	medium	excellent	medium	excellent	medium	excellent	excellent	medium	excellent	excellent	
<b>Outdoor resistance</b>	medium-term	short-term	medium-term	short-term	medium-term	medium-term	long-term	medium-term	medium-term		<b>Outdoor resistance</b>	long-term	long-term	medium-term	long-term	medium-term	long-term	medium-term	short-term	medium-term	medium-term		<b>Outdoor resistance</b>	long-term	medium-term	short-term	short-term	medium-term	short-term	short-term	long-term	medium-term	medium-term	
<b>Special characteristics</b>	can be laminated	dishwasher resistance	flexible ink film	high block resistance	very mild	mat ink film	very good printability	very good vacuum formability	excellent forming properties		<b>Special characteristics</b>	high alkaline resistance	plasticiser resistant	for untreated PP	resistant to chemicals	flexible ink film	resistant to petrol	high wash resistance	cold fixable	allround ink	flexible ink film		<b>Special characteristics</b>	vacuum formability	dishwasher resistant	highly reactive	optimised ink rheology	resistant to chemicals	very fast adhesion	very high gloss	for rotary screen printing	very universal	mat UV-ink	
<b>Basic shades</b>	17	14	21	21	21	17	17	21	17		<b>Basic shades</b>	17	13	14	21	21	21	17	12	13	13		<b>Basic shades</b>	13	13	13	13	13	13	13	13	13	13	
<b>4-Clr. Process</b>	-	4	-	4	4	-	8	-	-		<b>4-Clr. Process</b>	-	-	4	-	-	-	-	8	-	-		<b>4-Clr. Process</b>	8	4	8	12	4	4	4	8	4	4	
<b>Other</b>	8	12	8	-	9	4	1	26	-		<b>Other</b>	-	3	1	8	1	36	1	-	2	2		<b>Other</b>	2	14	2	12	2	3	2	5	2	1	
<b>Specials</b>	Metallic Mixing System	transp. shades, etch imitations	fluorescent (mat)	suitable for placarding	PANTONE® Basic Shades	blocking silver	4-colour process with higher density	highly fade-resistant shades	1C-ink system		<b>Specials</b>	UV absorber, printing varnish	press-ready silver and gold	opaque white	PU for traffic signs	opaque white	transparent shades	opaque white	opaque white	4-colour process with higher density	opaque white, opaque black		<b>Specials</b>	4-colour process with higher density	etch imitations	opaque white, opaque black	CD-R Match, fluorescent	opaque white, opaque black	thixotropic opaque white	opaque white, opaque black	silicone-free opaque white	satin-matt 4-colour process	opaque black	
Auxiliaries											Auxiliaries											Auxiliaries												
<b>Thinner</b>	UKV 1	GLV	QNV	UR 3	LIGV	-	UKV 2	UKV 1	UKV 1	UKV 1	<b>Thinner</b>	PV	PLV	QNV/UKV 1	PUV	UKV 1	UKV 1	UKV 1	water	UVV 6	UVV 6	<b>Thinner</b>	UVV 6	UVV 6	UVV 2	UVV 1/UVV 2	UVV 2	UVV 4	UVV 1	UVV 5	UVV 2	UVV 2	UVV 2	
<b>Thinner, mild</b>	UKV 2	-	-	PSV	UKV 2/PSV	UKV 2	PSV	UKV 2/PSV	-	-	<b>Thinner, mild</b>	-	-	-	-	UKV 2	UKV 2	UKV 2	-	-	-	<b>Thinner, mild</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Retarder</b>	SV 5	SV 1	SV 1	SV 1	SV 1	SV 1	SV 5	SV 1	SV 1	SV 1	<b>Retarder</b>	SV 5	-	SV 1	SV 1/SV 5	SV 3/SV 5	SV 1/SV 5	SV 1	-	-	-	<b>Retarder</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Retarder, slow</b>	SV 10	SV 9	SV 9	-	SV 9	SV 9	SV 10	SV 9	SV 10	SV 10	<b>Retarder, slow</b>	SV 10	-	-	SV 9	SV 9	SV 10	-	-	-	-	<b>Retarder, slow</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Retarder paste</b>	-	-	VP	-	VP	VP	VP	VP	-	-	<b>Retarder paste</b>	-	-	-	-	-	VP	-	-	-	-	<b>Retarder paste</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Hardener</b>	-	GLH	-	-	-	-	-	-	-	H 2	<b>Hardener</b>	H 1	-	-	H 1/H 2/HT 1	+/- H1/H2/HT1	+/- H 1	H 2	TXCH	-	UV-HV 2/4	<b>Hardener</b>	-	UVHV 8	-	-	UV-HV 1/4	UV-HV 4, H2	H1/H2	-	UV-HV1/2/4	UV-HV1/4	UV-HV1/4	
<b>Print varn./bronze binder</b>	FX910/FX904	GL 910	GO 910/902	GR 910	LIG 910	LIM 910	LIP 910	LIS 910	MACR 910	MPC 910	<b>Print varn./bronze binder</b>	P 910	-	PP 902	PU910/PU911	PY 910	SR910/SR911	TK 902	TXC 902	UVAR 904/910	UVF 904	<b>Print varn./bronze binder</b>	904/910/911	904/910	UVGR 904/910	UVOD 904/912	UVP 904	UVPK 904	UVPOR 904	UVRS 904	UVS 904	UVSM 904		
<b>Transparent base</b>	-	GL 409	GO 409	GR 409	LIG 409	LIM 409	LIP 409	LIS 409	-	-	<b>Transparent base</b>	P 409	-	PP 409	-	-	SR 409	-	-	UVAR 409	UVF 409	<b>Transparent base</b>	UVFM 409	UVGO 409	UVGR 409	UVOD 409	UVP 409	UVPK 409	UVPOR 409	-	UVS 409	UVSM 409		
<b>Cleaner</b>	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	UR 4	UR 3	<b>Cleaner</b>	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	<b>Cleaner</b>	UR 3	UR 3	UR 3	UR 3	UR 3	UR 3	UR 4	UR 3	UR 3	UR 3	UR 3	
Substrates											Substrates											Substrates												
<b>Polystyrene (PS)</b>											<b>Polystyrene (PS)</b>											<b>Polystyrene (PS)</b>						+/- HV 4					+/- HV 4	
<b>ABS/SAN</b>											<b>ABS/SAN</b>											<b>ABS/SAN</b>						+/- HV 4					+/- HV 4	
<b>Self-adhesive PVC foil</b>											<b>Self-adhesive PVC foil</b>											<b>Self-adhesive PVC foil</b>												
<b>PVC, rigid</b>											<b>PVC, rigid</b>											<b>PVC, rigid</b>												
<b>PVC, soft</b>			<sup>2</sup>		<sup>2</sup>	<sup>2</sup>	<sup>2</sup>	<sup>2</sup>			<b>PVC, soft</b>		<sup>2</sup>							<sup>2</sup>	<sup>2</sup>	<b>PVC, soft</b>								<sup>2</sup>   +/- HV 2				
<b>Polycarbonate (PC)</b>	m										<b>Polycarbonate (PC)</b>											<b>Polycarbonate (PC)</b>												
<b>Polyester, emboss</b>											<b>Polyester, emboss</b>											<b>Polyester, emboss</b>												
<b>PETG, PETA</b>											<b>PETG, PETA</b>				2K	2K						<b>PETG, PETA</b>					HV 4	HV 4				HV 4		
<b>Acrylic glass (PMMA)</b>											<b>Acrylic glass (PMMA)</b>											<b>Acrylic glass (PMMA)</b>					HV 4	HV 4				HV 4		
<b>PE, PP, pre-treated</b>											<b>PE, PP, pre-treated</b>	<sup>3</sup>		<sup>3</sup>   (PP)	<sup>3</sup>	<sup>3</sup>   2K				<sup>1</sup>	<sup>1</sup>	<b>PE, PP, pre-treated</b>	<sup>1</sup>				<sup>3</sup>   HV 4	<sup>3</sup>   +/- H2	<sup>3</sup>   +/- H2	<sup>1</sup>	<sup>1</sup>	<sup>3</sup>   HV 4		
<b>PP, un-treated</b>											<b>PP, un-treated</b>											<b>PP, un-treated</b>												
<b>Polyamide (PA)</b>											<b>Polyamide (PA)</b>					2K	2K		(Nylon)			<b>Polyamide (PA)</b>					<sup>3</sup> m HV 4	<sup>3</sup>				<sup>3</sup> m HV 4		
<b>Polyacetal (POM)</b>											<b>Polyacetal (POM)</b>					m 2K	2K					<b>Polyacetal (POM)</b>												
<b>Thermoplastics</b>											<b>Thermoplastics</b>				2K	2K						<b>Thermoplastics</b>												
<b>Paper, corrugated paper</b>											<b>Paper, corrugated paper</b>											<b>Paper, corrugated paper</b>												
<b>Coated substrates</b>		<sup>2</sup>									<b>Coated substrates</b>	<sup>2</sup>		<sup>2</sup>	<sup>2</sup>   2K	<sup>2</sup>   2K						<b>Coated substrates</b>		<sup>2</sup>   HV 8			<sup>2</sup>   HV 4				<sup>2</sup>   HV 4			
<b>Anodised aluminium</b>		<sup>2</sup>									<b>Anodised aluminium</b>	<sup>2</sup>		<sup>2</sup>	<sup>2</sup>   2K	<sup>2</sup>   2K						<b>Anodised aluminium</b>	<sup>2</sup>   HV 1			<sup>2</sup>   HV 4				<sup>2</sup>   HV 4				
<b>Metals</b>		<sup>2</sup>									<b>Metals</b>	<sup>2</sup>		<sup>2</sup>	<sup>2</sup>   2K	<sup>2</sup>   2K						<b>Metals</b>	<sup>2</sup>   HV 8			<sup>2</sup>   HV 1				<sup>2</sup>   HV 1				
<b>Glass</b>											<b>Glass</b>											<b>Glass</b>		HV 8										
<b>Wood</b>											<b>Wood</b>											<b>Wood</b>												
<b>Textiles, synthetics</b>											<b>Textiles, synthetics</b>										m	<b>Textiles, synthetics</b>												
<b>Textiles, cotton</b>											<b>Textiles, cotton</b>											<b>Textiles, cotton</b>												
<b>Typical or additional application</b>	identity cards	glass, for indoor applications	graphic screen printing	paper and cardboard	graphic screen printing	printing onto PC foils	universal graphical ink	PMMA signs	IMD ink for PMMA	IMD ink for polycarbonate	<b>Typical or additional application</b>	bottle crates made of PE/PP	soft PVC tarpaulins	PP folder and binders, banners made of PP	metal housings	container printing	membrane switches	sunshades, sun blinds	cotton textiles	universal graphical ink	labels	<b>Typical or additional application</b>	vacuum formable parts	glass, packaging	graphic screen printing	all Optical Disc formats	industrial screen printing	packaging	packaging	labels	graphic screen printing	graphic screen printing		

I = suitable    m = limited suitability    2C = with 10% hardener H1 or H2    HV = adhesion modifier    <sup>1</sup> = pre-treated PE and PP foils    <sup>2</sup> = pre-treatment with IPA    <sup>3</sup> = pre-treatment by flame or Corona    , = post-treatment by flame, hot air, or oven drying    Please note that this chart only gives a survey of application fields. For detailed information, please see our technical data sheets.