

Product Data Sheet

Screen Printing Ink

M

Solvent Based Screen Ink Range, 1-Component

APPLICATION

Screen printing inks for printing on paper, carton, cardboard and hard fibreboards.

PROPERTIES

- Screen inks M are solvent based, 1-component screen printing inks with a good printability. They dry quickly by evaporation of solvents and result in a matt finish.
- Applied on suitable papers M prints generally show a good glue resistance.
- Prints of matt screen inks M exhibit good scratch and folding resistance. If required these resistances can be enhanced by adding approx. 5% plasticizer W 1.
- Due to the matt finish, the surface of M prints is a little sensitive. Therefore, overprinting with varnish M 70 is recommended for more demanding applications.
- Ink range M is suitable for indoor applications. Applied on weather resistant papers and cardboards screen inks M inks are also suitable for short-term outdoor use.

COLOUR SHADES - OVERVIEW

- Opaque: Standard Colour shades with medium to good opacity.
- Process Inks "180" colours 4 transparent colour shades according to ISO 2846-4.
- Special colour shades are available upon request.
- More information about available colour shades in the detailed tables in section Colour Shades.

CHOICE OF PIGMENTS AND LIGHT FASTNESS

Colour shades of M ink range contain pigments with a good light fastness.

Ink range M is suitable for indoor applications. Applied on sufficiently weather resistant papers and cardboards screen inks M inks are also suitable for short-term outdoor use.

ADJUSTMENT FOR SCREEN PRINTING

- Screen printing inks M are not supplied in a ready-to-print adjustment.
- Depending on local conditions the ink is adjusted for printing by addition of 15 to 25 % by weight thinner or retarder (stir with mixer, agitator).
- Prior to printing, the inks should be stirred well to obtain a homogeneous dispersion of all ingredients.

THINNERS / RETARDERS

For adjustment of screen inks M, the following products are available:

Thinner:	■ MVS	Standard thinner, very quick
	■ MVH	Standard thinner
Retarder:	■ MD	Standard retarder
	■ = Preferred	○ = Suitable

Depending on printing conditions, the products listed above can be mixed into the inks individually or as mixtures. Please note that depending on evaporation rate of the thinner/retarder used drying times may be longer.

Thinner/retarder should be mixed into the ink thoroughly using a mixer or agitator. In addition, inks should be stirred well prior to each processing to obtain a homogeneous dispersion of all ingredients.

Note: Because of the special binder composition of M ink range, only above mentioned products can be used for adjustment.

ADDITIONAL AUXILIARY AGENTS

Application	Product	Addition in % by weight	Additional Information
Viscosity increase	Thickening powder	Max. 3%	Stir with mixer
	M/KP (crystal paste)	As required	Colour shade will become brighter
Flow agent	VM 2	0.3 - 0.5%	Do not overdose!
Anti floating agent	LAB-N 561248	1 - 1.5%	Stir with mixer

OVERPRINTING

Generally, it is not necessary to overprint M inks with varnish. However, overprinting to protect the sensitive finish is possible with the following solvent based special varnish:

- M 70: 1-component, Overprint varnish

BRONZE COLOURS, MIXING OF BRONZE INKS

Bronze colours may be available upon request.

Printers can mix bronzes themselves using bronze pastes B 75, B 76, B 77 and B 79 as well as bronze powder B 78-POWDER. For examples of colour shades please refer to our Bronze Colour Card.

These "B" bronze pastes and "B" bronze powder are mixed with bronze binder M/B prior to processing.

Mixing ratios in parts by weight:

Gold bronze paste/powder to M/B = 1 : 2 - 4

Silver bronze paste to M/B = 1 : 4 - 6

Bronzes B 75 to B 79 are prone to oxidation (exception B 78-POWDER). Therefore, they should be overprinted, e.g. with M 70. B-bronzes are not recommended for long-term outdoor applications.

B 78-POWDER does not tend to oxidation. The pale copper shade will not darken with time. Colour of inks mixed with B 78-POWDER is similar to colour 78/AB as shown on our "bronze colour card".

Note: When overprinting bronze colours with varnish or other colour shades, it is essential to carry out pre-tests to check intermediate adhesion of the ink layers (fingernail test, tape test). Possibly mixing ratio needs to be changed to a higher varnish ratio (between 10 – 30%).

DRYING

M screen printing inks dry physically, i.e. by evaporation of solvents.

Drying times below are only approximate as drying properties depend on various factors:

- Type and amount of thinners/retarders used.
- Thickness of printed ink layer; number of overprinted ink layers.
- Rack drying or tunnel dryer.
- Temperature, air supply, speed of air stream.
- Type of substrate/material printed.

Depending on local conditions, drying time in a drying frame (rack) is approx. 10 - 15 minutes at room temperature (20°C). Drying time using an efficient tunnel dryer (e.g. 2 hot air and 1 cold air section) is about 20 - 60 seconds at a temperature of 50°C.

Note: Addition of retarders may result in much longer drying times!

SCREEN FABRIC / STENCILS

M inks have been formulated for printing with fabrics ranging from 77 to 140 threads/cm. Suitability for printing with coarser or finer fabrics should be determined by corresponding pre-trials.

All copy emulsions and capillary films suitable for solvent based screen inks can be used, such as our program of SunCoat or Murakami products.

CLEANING

Stencils and tools can be cleaned with our universal cleaning agents URS or URS 3.

PACK SIZE

Screen printing inks M are delivered in 1 litre containers. Other pack sizes are available upon request.

SHELF LIFE

In closed original containers, M inks generally have a shelf life of 5 years from date of production.
For exact date of expiry, please refer to the label.

SAFETY DATA SHEETS

Read safety data sheet prior to processing
Safety data sheets comply with Regulation (EC) No. 1907/2006 (REACH), Appendix II.

CLASSIFICATION AND LABELLING

Hazard classification and labelling comply with Regulation (EC) No. 1272/2008 (CLP/GHS).

CONFORMITY

Coates Screen Inks GmbH does not use any of the substances or mixtures for the production of printing inks, which are banned according to the EUPIA (European Association of the Printing Inks Industry) exclusion policy. Further compliance confirmations are available upon request.

ADDITIONAL INFORMATION ABOUT OUR PRODUCTS

Product data sheets: Auxiliary Agents for Screen Printing HM
Brochures: Solvent Based Screen Printing Inks
Internet: Various technical articles are available for download on www.coates.de,
section "SN-Online"

FOR COLOUR RANGES, PLEASE REFER TO NEXT PAGE.

COLOUR SHADES

STANDARD Colour Range (medium opacity)					
According to colour card M					
Availability of further standard shades upon request					
citric yellow	M 10/NT-NEU	dark pink	M 24/NT-NEU	light green	M 40/NT-NEU
medium yellow	M 11/NT-NEU	light blue	M 30/NT-NEU	dark brown	M 51/NT-NEU
dark yellow	M 12/NT-NEU	medium blue	M 31/NT-NEU	white	M 60/NT-NEU
light red	M 20/NT-NEU	ultra marine	M 32/NT-NEU	black	M 65/NT-NEU
bright red	M 21/NT-NEU	marine blue	M 35/NT-NEU		
carmine red	M 22/NT-NEU	violet	M 36/NT-NEU		
STANDARD Colour Range HD (high opacity)					
According to colour card STANDARD HD for screen printing inks					
Availability of further standard HD shades upon request					
white, highly opaque	M 60/HD-NT-NEU	black, highly opaque	M 65/HD-NT-NEU		
SPECIAL PRODUCTS: Special Colour Shades, Varnishes, Pastes					
Information about availability upon request					
bronze binder	M/B	transparent paste	M/TP		
overprint varnish	M 70	crystal paste	M/KP		
4 COLOUR PROCESS INKS (CMYK)					
According to colour card STANDARD 1 for screen printing inks					
process yellow	M 180/NT-NEU	process black	M 65/40-NT		
process magenta	M 181/NT-NEU	transparent paste	M/TP		
process cyan	M 182/NT-NEU				

Matching of PMS, RAL, NCS colours and special shades upon request.

All above information refers to the colour shades listed in this product data sheet and other standard shades of this screen ink range. Information about availability of further standard shades upon request.

In some individual cases the product characteristics of special colour shades and modifications of this ink type manufactured upon customer request may differ from the above properties.

The statements in our product and safety data sheets are based on our present experiences, however they are no assurance of product properties and do not justify a contractual legal relationship. We provide these details to inform customers about our products and their possible applications. However, on account of various factors influencing processing of our products it is absolutely essential to carry out printing trials under local production conditions. Choice of individual ink types and their suitability for the intended application is the sole and entire responsibility of the user. We do not assume any liability for any problems of technical or process-related nature. Any liability shall be limited to the value of the goods delivered by us and processed by the user.

All former product data sheets are no longer valid.

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