



SAPPHIRE Ink
MB Series
2-Part Pad Printing Ink

General Overview:

MB Series is the “go to” high gloss 2-component pad printing ink which has excellent adhesion to difficult substrates. MB is an easy to use, fast curing opaque ink series with superior mechanical and chemical resistance to alcohol, acids and alkali on metals and hard plastics.

Substrates:

- Metals and painted surfaces
- Hard plastics
- Pre-treated polypropylene and polyethylene
- Acrylics
- Powder coated surfaces
- Epoxy resins

Typical Applications:

- Stainless Steel mugs
- Coated metals
- Industrial Products
- Pens & Promotional products
- Automotive knobs/buttons
- Containers
- Coins

Mixing Preparation: 2 component ink

Hardeners: MB Series inks cures by cross-linking. Add 1000H Hardener at a ratio of one part hardener to four parts inks (4:1) by weight for standard shades and one part hardener to three parts inks (3:1) by weight for transparent colors. MB Series ink has an 8/9 hour working pot life.

Thinner: Immediately after adding the hardener the mixture should be adjusted to printing viscosity with 10% - 30% Type M or Type MS thinner by weight. Adding thinner will make the ink more viscous and slower drying.

Drying: MB Series inks cure by chemical cross-linking. It will be ready for overprinting in less than 60 seconds and will be dust dry in 20 minutes at room temperature. Complete cross-linking (full cure) of the inks is realized in 6-8 days at room temperatures. Dust dry and full cure conditions can be significantly accelerated by the application of heat.

Retarder: For fine prints, add Type MS retarder in proportions not to exceed 50% by weight of thinner. Adding excess retarder may inhibit ink transfer from pad to substrate.



Auxiliary Agents

Thinner	Type M
Slow Thinner	Type MS
Hardener	1000 H
Alt. Hardener	1000 HN (for outdoor)

Process Colors:

MB 1080	Europa Yellow
MB 1081	Europa Magenta
MB 1082	Europa Cyan
MB 1083	Europa Black

Standard Colors:

MB 110	Lemon Yellow	MB 132	Ultra Blue
MB 111	Medium Yellow	MB 133	Dark Blue
MB 112	Dark Yellow	MB 134	Turquoise
MB 115	Orange	MB 137	Violet
MB 117	Ochre Yellow	MB 140	Bright Green
MB 120	Bright Red	MB 141	Dark Green
MB 121	Signal Red	MB 142	Emerald Green
MB 122	Carmine Red	MB 150	Light Brown
MB 125	Light Pink	MB 151	Dark Brown
MB 130	Light Blue	MB 160	White
MB 131	Medium Blue	MB 165	Black

Mixing Colors:

MB 10	Lemon Yellow
MB 11	Dark Yellow
MB 12	Orange
MB 21	Signal Red
MB 22	Carmine Red
MB 25	Magenta
MB 27	Violet
MB 32	Blue
MB 40	Green
MB 60	White
MB 65	Black
MB 70	Transparent

High Density Colors:

MB 110 HD	Lemon Yellow
MB 111 HD	Medium Yellow
MB 112 HD	Dark Yellow
MB 115 HD	Orange
MB 120 HD	Bright Red
MB 121 HD	Signal Red
MB 122 HD	Carmine Red
MB 130 HD	Blue
MB 137 HD	Violet
MB 140 HD	Green
MB 160 HD	White
MB 165 HD	Black



Metallic Colors:

Standard Metallic: (Pre-Mix)		Outdoor Resistance (Pre-Mix)		Metallic Pastes	
MB 75ME	Pale Gold	MB 75RE	Pale Gold	MB B75	Pale Gold
MB 76ME	Yellow Gold	MB 76RE	Yellow Gold	MB B76	Yellow Gold
MB 77ME	Bright Gold	MB 77RE	Bright Gold	MB 77B	Bright Gold
MB 78ME	Rose Gold	MB 78RE	Rose Gold	MB 78B	Rose Gold
MB 79/02ME	Silver	MB 79/050	Silver	MB 79B	Silver
				MB 79/110	Metal Silver Flake
				MB 79/020	Metal Silver Flake
				MB 170/79	Metal Flake Black

ICN ADDITIONAL SERVICES:

Mixing System Colors:

ICN offers a series of 12 basic colors and all formulations required to generate all popular numerical color shades. This system provides formulations by weight in an easy to use format for generation of custom colors in house. ICN provides pre-generated documentation of all popular numerical color formulations in electronic or preprinted format *for all ink series*. These formulations are provided at “no charge” as a service to our customers and are calculated for a white background.

Color Matching Services:

The ICN color lab also provides custom computer generated color matching services at additional charge. Any ink color can be matched and verified on all surfaces with varying substrate background color.

Cleaning: Wet or “at press” cleaning should be achieved using the auxiliary thinners specified in the Auxiliary section of this technical data sheet. For general cleaning of ink cups, flood bars, Dr. blade assemblies, plates and print press components, ICN recommends the use of an appropriate “safety solvent” such as Easysolv 120 or MPC. These aggressive safety solvents contain no TLVS (Threshold Limit Values), are extremely effective and available from ICN.

Ink Removal: While our main mission as an ink provider is to “make it stick”, ICN offers a revolutionary new product called *Ink Away* to effectively remove misprints and allow re-processing of product. *Ink Away* will not harm plastic substrates and is effective in recovery from defective product!

Printing Pads: Successful decoration and print quality are heavily influenced by print pad selection. ICN manufactures the highest quality print pads available utilizing a proprietary high pressure process and can provide custom blended silicones that provide extended pad life and superior print quality. Our technicians are available to provide recommendations concerning pad selection and material types to compliment your decoration process.



Storage: Inks and solvents should be stored in a suitable “safe environment”, see local regulations. Shelf life for unopened inks is approximately two years under normal conditions. (Temperatures of 68 to 80 degrees F and humidity of 20-70%). Metallic colors, due to pigment composition, have a shelf life of 12 months. All unopened solvents have an indefinite shelf life.

Packaging: All color shades are packaged in standard 1kilogram containers. Optional 5 kilogram packaging is offered as “special order” for high volume users. Due to cost and restricted shelf life, metallic shades are offered in 1 kilogram and ½ kilogram packaging.

Precautionary measures: Please review all material safety data sheets for this and all products prior to use. The material safety data sheets have been compiled to indicate precautionary instructions regarding use, handling, storage, first aid measures and transportation for products used in the workplace. Please contact ICN with any technical questions regarding our products or to obtain additional MSDS information