



SAPPHIRE Ink
SB Series
1-Part or 2-Part Pad Printing Ink

General Overview:

SB Series is a specialized 1 or 2 component pad printing ink with excellent adhesion to rubber-like substrates. Its unique flexibility, high gloss and opacity make it the ideal choice for rubberized and soft-touch items. SB as a 2 component ink provides exceptional mechanical abrasion resistance.

Substrates:

- Rubber
- Polyurethane based materials
- Polyamides
- PVC
- Flexible substrates
- Textiles

Typical Applications:

- Stress balls
- Play balls & sporting goods
- Skateboard Wheels
- “Soft Touch” surfaces
- Soft PVC
- ID Cards
- Binders & report covers

Mixing Preparation: 2 component usage optional

Hardeners: SB Series inks cure by air drying and cross-linking. Add 1000H Hardener at a ratio of one part hardener to ten parts ink (10:1) by weight. SB Series ink (when using hardener) has a 7/8 hour working pot life.

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

Drying: SB Series inks cure by air drying or 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 SB-MS retarder in proportions not to exceed 50% by weight of thinner. Adding too much retarder may inhibit ink transfer from pad to substrate.



Auxiliary Agents

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

Process Colors:

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

Standard Colors:

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

Mixing Colors:

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

Vibrite Super Opaque Colors:

SB 160 HD	White
SB 165 HD	Black



Metallic Colors:

Standard Metallic: (Pre-Mix)

SB 75RE	Pale Gold
SB 76RE	Yellow Gold
SB 77RE	Bright Gold
SB 78RE	Rose Gold
SB 79/050	Silver

ICN ADDITIONAL SERVICES:

Mixing System Colors:

ICN offers a series of 12 basic colors and all formulations required to generate color shades in Pantone, HKS and the RAL scale. 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 Pantone, HKS and RAL 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 Pantone ink color can be matched and verified for all surfaces with varying substrate 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