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

General Overview:

BT Series ink is a high gloss, easy to process, all purpose 1 or 2 component pad printing ink. It is an "all-around" plastic ink that adheres to a wide range of products in only comes in High Density and Harmony mixing system colors. Excellent for both pad and screen printing, BT Series ink is ideal for substrates where opacity and gloss are a premium. As a two component ink has an exceptional abrasion resistance and an extended pot life of 8-9 hours.

Substrates:

- ABS, SAN, PETG & VIVAK
- Polystyrene & Polycarbonate
- Vinyl - Soft & hard PVC
- PVC copolymers
- Polymethacrylate
- Paper & Wood
- Varnished substrates

Typical Applications:

- Translucent plastics
- Promotional products
- Injection molded products
- Consumer Products
- Medical Devices
- Vinyl balls
- Cosmetics & Containers

Mixing Preparation: 2 component usage optional

Thinner:
Pad Printing - The Ink mixture should be thinned to printing viscosity with 15% - 20% Type BT-M (faster) or Type EB (slower) by weight. Adding thinner will make the ink less viscous and dry slower.

Screen printing - The Ink mixture should be thinned to printing viscosity with 8% - 15% Type EB Thinner by weight. Adding thinner will make the ink less viscous and dry slower.

Hardeners: BT Series inks cures by air drying and cross-linking (when using hardener). Add 1000H Hardener at a ratio of one part hardener to ten parts inks (10:1) by weight. When catalyzed, BT Series ink has an 8/9 hour working pot life.

Drying: BT Series inks cure by air drying and chemical cross-linking (when using hardener). It will be ready for overprinting immediately and will be dust dry in 30 seconds 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, Type SP-5 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 BT-M**
Slow Thinner	**Type EB**
Screen Thinner	**Type EB**
Hardener	**1000 H**
Alt. Hardener	**1000 HN**

Process Colors:

BT 1080	**Europa Yellow**
BT 1081	**Europa Magenta**
BT 1082	**Europa Cyan**
BT 1083	**Europa Black**

High Density Colors:

BT 110	**Lemon Yellow**	**BT 133**	**Dark Blue**
BT 111	**Medium Yellow**	**BT 136**	**Violet**
BT 115	**Orange**	**BT 140**	**Bright Green**
BT 120	**Bright Red**	**BT 141**	**Dark Green**
BT 121	**Signal Red**	**BT 142**	**Emerald Green**
BT 122	**Carmine Red**	**BT 151**	**Dark Brown**
BT 124	**Magenta**	**BT 160**	**White**
BT 130	**Light Blue**	**BT 165**	**Black**
BT 131	**Medium Blue**		
BT 132	**Ultra Blue**		

Mixing Colors:

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

Metallic Colors:

Standard Metallic: (Powders)

BT 75	**Pale Gold**
BT 76	**Yellow Gold**
BT 77	**Bright Gold**
BT 78	**Bronze**
BT 79	**Silver**

20 Locust Street, Suite 104, Danvers, MA 01923 phone: 800-780-8071 fax: 978-646-8981
www.inkcups.com

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.