



**SAPPHIRE Ink**  
**BA Series**  
**1-Part or 2-Part Pad Printing Ink**

**General Overview:**

BA Series ink is a high gloss, easy to use all purpose 1 or 2 component pad printing ink. It is a fast drying ink that adheres to a wide range of products. As a two component ink has an exceptional abrasion resistance and an extended pot life of 8-9 hours.

**Substrates:**

- ABS, SAN, Rigid PVC
- Polycarbonates & hard plastics
- Pre-treated polypropylene and polyethylene
- Acrylics
- Polyester & Polyurethane
- Wood & varnished substrates

**Typical Applications:**

- Promotional products
- Injection molded parts
- Cosmetic containers
- Medical Devices
- Wood
- Packaging
- Housings

**Mixing Preparation: 2 component usage optional**

**Hardeners:** BA 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. BA Series ink (when using hardener) 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 thinners by weight. Adding thinner will make the ink less viscous and slower drying.

**Drying:** BA 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 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**

|                      |                              |
|----------------------|------------------------------|
| <b>Thinner</b>       | <b>Type M</b>                |
| <b>Slow Thinner</b>  | <b>Type MS</b>               |
| <b>Hardener</b>      | <b>1000 H</b>                |
| <b>Alt. Hardener</b> | <b>1000 HN (for outdoor)</b> |

**Process Colors:**

|                |                       |
|----------------|-----------------------|
| <b>BA 1080</b> | <b>Europa Yellow</b>  |
| <b>BA 1081</b> | <b>Europa Magenta</b> |
| <b>BA 1082</b> | <b>Europa Cyan</b>    |
| <b>BA 1083</b> | <b>Europa Black</b>   |

**Standard Colors:**

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

**Mixing Colors:**

|              |                     |
|--------------|---------------------|
| <b>BA 10</b> | <b>Lemon Yellow</b> |
| <b>BA 11</b> | <b>Dark Yellow</b>  |
| <b>BA 12</b> | <b>Orange</b>       |
| <b>BA 21</b> | <b>Signal Red</b>   |
| <b>BA 22</b> | <b>Carmine Red</b>  |
| <b>BA 25</b> | <b>Magenta</b>      |
| <b>BA 27</b> | <b>Violet</b>       |
| <b>BA 32</b> | <b>Blue</b>         |
| <b>BA 40</b> | <b>Green</b>        |
| <b>BA 60</b> | <b>White</b>        |
| <b>BA 65</b> | <b>Black</b>        |
| <b>BA 70</b> | <b>Transparent</b>  |

**Vibrite Super Opaque Colors:**

|                  |                      |
|------------------|----------------------|
| <b>BA 110 HD</b> | <b>Lemon Yellow</b>  |
| <b>BA 111 HD</b> | <b>Medium Yellow</b> |
| <b>BA 112 HD</b> | <b>Dark Yellow</b>   |
| <b>BA 115 HD</b> | <b>Orange</b>        |
| <b>BA 120 HD</b> | <b>Bright Red</b>    |
| <b>BA 121 HD</b> | <b>Signal Red</b>    |
| <b>BA 122 HD</b> | <b>Carmine Red</b>   |
| <b>BA 130 HD</b> | <b>Blue</b>          |
| <b>BA 137 HD</b> | <b>Violet</b>        |
| <b>BA 140 HD</b> | <b>Green</b>         |
| <b>BA 160 HD</b> | <b>White</b>         |
| <b>BA 165 HD</b> | <b>Black</b>         |



**Metallic Colors:**

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