



Gloss Bottle GBS is a one-part screen ink developed with the needs of the container printer in mind. This unique UV ink adheres to HDPE, LDPE, PET, PVC and PP without the use of adhesion promoters or catalysts. GBS Series exhibits excellent flexibility for squeeze tests on thin walled bottles, yet it maintains a durable chemical and water resistant surface which withstands stringent product tests.

Version 1.11.19.2004

Performance Properties

- Cures with hard surface for immediate packaging
- Distinct rheological properties for smooth prints
- Unequaled adhesion to PE, PP, and PET
- No flame required for PET adhesion
- High flexibility for thin walled containers
- Superb water and chemical resistance
- Opaque, non-yellowing bright white

Printing

Mix well prior to use. While supplied in press ready condition, GBS may be reduced up to 10% with #8044 Thinner. Care should be taken to print the ink at optimal temperature 70-90°F (21-27°C). Cool ink will have heavier viscosity and will not flow properly. Hot ink will be lower in viscosity resulting in poor definition and decreased opacity.

Curing

Ink will cure well when printed through 380-460 (150-180cm) plain weave polyester mesh or finer. GBS's optimal cure window of 125-150 mJ / 550-650 mW is generally achieved with one 300 watt per inch mercury vapor lamp at press speeds up to 70 containers per minute. Cure speeds may vary as thicker material and dark surface colors require more energy.

Adhesion should be a minimum of 95% from curing unit with final adhesion developing within four hours of initial polymerization. Coarser fabrics can be utilized; however, cure parameters may need to be adjusted for increased ink film.

If a loss of gloss or adhesion due to insufficient cure is noticed, the use of 5-10% GBS Metallic Mixing Clear will increase light penetration and improve cure in opaque colors without viscosity reduction.

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MIX WELL BEFORE USE. Follow any indications on the package, ask for the safety data sheets and always follow the indications contained therein. In case of doubt, please contact our Technical Service department

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Recommended Substrates

For best results the following require a flame treatment prior to printing:

- High Density Polyethylene
- Low Density Polyethylene
- Polypropylene

No flame is required for:

- PVC
- PET

Coverage

3,200 to 3,600 square feet per gallon based on ink deposit of .40-.60 mil dependant on color and printing conditions.

Water Resistance

GBS has passed all laboratory conducted water immersion / wet flex tests. Printed bottles were tested immediately as well as after a 24 hour 'post cure' period. This period, between curing and testing, provides the ink film and substrate time to stabilize thereby improving adhesion properties.

Chemical Resistance

Properly cured GBS ink successfully withstood chemical testing (50 pass, double rub) with oil / gasoline mixture, ammonia, Windex™, bleach, and 99% strength isopropyl alcohol. To determine suitability of the ink for intended use, a chemical test prior to production is recommended.



Storage

Care should be taken to store ink in tightly closed containers located in a cool (60-80°F/15-27°C) dark place. After long production runs excess ink from the screen should be properly disposed. With suitable conditions, unopened ink is expected to have a shelf life of approximately twelve (12) months from date of manufacture.

Metallics

Use the Metallic Mixing Clear to prepare metallic ink as it's increased viscosity helps insure a good particle suspension and extended shelf life. Recommended mixing ratios, by weight are:

- 28% gold paste
- 12% silver paste

For optimum coverage and opacity, 280-305 (110-120cm) plain weave mesh is recommended. Use 6918 Solar Shield Clear for extended weatherability and to improve the non-tarnishing properties of the product.

Additives

- 8044 Thinner up to 10% as needed
- 1534 Adhesion Promoter up to 3% as needed

Precautions

Read the material safety data sheet prior to processing. It contains instructions for precautions when handling inks. If ink comes in contact with skin, wipe ink off with a clean, dry cloth (do not use solvent). Wash and rinse the affected area with soap and water.

Process Printing

For superior halftone reproduction, GBS halftones are available in a range of density levels. Additional control of density may be achieved with use of GBS HT Base. For best results, 380 (150 cm) or finer and a smooth, thin stencil coating should be utilized with process printing.

| | Press Ready | High Density |
|----------------------|-------------|--------------|
| GBS Halftone Yellow | 0.90 | 1.10 |
| GBS Halftone Magenta | 1.40 | 1.75 |
| GBS Halftone Cyan | 1.40 | 1.80 |
| GBS Halftone Black | 1.60 | 2.00 |

Color Availability

GBS is available in eight opaque standard colors. Custom matches, metallic, fluorescent and transparent colors are obtainable upon request.

| | |
|--------------------------|---------------------------|
| GBS-111 Lemon Yellow | GBS-220 Emerald Green |
| GBS-131 Brilliant Orange | GBS-301 Opaque Black |
| GBS-141 Fire Red | GBS-311 Opaque White |
| GBS-155 Rubine Red | GBS-312 Dense Black |
| GBS-160 Rhodamine Red | GBS-026 Brilliant White |
| GBS-205 Reflex Blue | GBS Overprint Clear |
| GBS-210 Ultra Blue | GBS Metallic Mixing Clear |

Pantone Matching System® Colors

The nine PANTONE® approved Color Matching System (CMS) shades are used to simulate the PANTONE Color Specifier colors. Formulas were designed for maximum opacity and are available in book or Imaging Color Source Software formats.

- GBS-064 CMS GS Yellow
- GBS-066 CMS RS Yellow
- GBS-114 CMS Orange GBS-121 CMS YS Red GBS-164 CMS BS Red GBS-165 CMS Magenta GBS-127 CMS Violet
- GBS-230 CMS Blue
- GBS-325 CMS Green
- GBS Tinting White
- GBS Shading Black
- GBS Mixing Clear

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