# Product: HG
# Series: HG™

**DESCRIPTION:** HG screen printing inks are suitable for printing on all types of thermoplastics, especially acrylics, rigid and plasticized PVC, CAB. (Cellulose Acetate Butyrate), various types of polystyrene, and polycarbonate. HG is not suitable for polyethylene and polypropylene substrates.

**NOTE: Pretest all substrates prior to use in production.**

**CHARACTERISTICS:** HG inks air dry or jet dry quickly to a high gloss finish. The degree of gloss depends on the substrate, and in some cases the color shade. HG inks are processed easily and have relatively mild odor. HG blending colors are formulated on brilliant, weather resistant pigments with maximum lightfastness. Opacity can be enhanced with the addition of HG-W50 Blending White.

**NOTE:** All air drying screen inks retain solvents to some degree, full adhesion and other resistance properties may not be achieved until one to two days after printing. Certain high pigmented HG inks such as Opaque White may show surface cracks when dried under adverse conditions.

**PIGMENTS & LIGHTFASTNESS:** HG inks are available in SunMatch™ blending shades, 4 color process, transparent shades, metallics and special dyes. If blended inks are mixed to contain high contents of white or clear, lightfastness is reduced.

**MODIFICATION:** Prior to processing, the viscosity of HG inks is usually adjusted 5-25%, by weight, with the appropriate thinner or retarder HG-V and/or HG-D. Universal thinners/retarders, UV1 to UV4, can also be used. HG inks can be adjusted for spray applications with approx. 25-40%, by weight, of HG-VSP.

**DRYING:** HG inks air dry by evaporation of solvents. Drying time is approx. 10-15 minutes at room temperature or 30-60 sec. in a belt dryer at temperatures of approx. 104-122°F (40-50°C). Distortion of the printed material is reduced to a minimum due to quick evaporation of solvents. Drying speed may be reduced when multiple layers are applied. If utilizing a rack drying system, ensure good air circulation to prevent solvent being trapped in the ink.

**COMPATIBILITY:** HG inks are compatible and inter-mixable with certain other screen inks for plastics, such as Sun Chemical's C32, C99 and JM ink series. The drying speeds and affect of mixed inks on the substrate will differ from that of the original components.

**METALLIC INKS:** For metallic prints, HG-E50 Mixing Clear can be blended with metallic pastes and powders B75 to B79 to produce ready-for-use inks. Typical mixing percentages are as follows:

20-25% Gold Bronze paste + 75-80% HG-E50 Mixing Clear

10-15% Silver Aluminum paste + 85-90% HG-E50 Mixing Clear

**NOTE:** If metallic inks are to be overprinted, we recommend an additional 10-30%, HG-E50 to the metallic mixtures. In all cases, it is essential to check the overprintability. Due to the influence of humidity and oxidation components in the air, metallic prints tend to oxidize. Overprinting the metallics will delay this oxidation process for some time.

Sun Chemical has reduced the oxidation problem by offering the AB premixed metallic series and the MG Metalure series. These inks are produced by an expensive processing method using special metallics and pigments.

The HG-**AB metallic series offers good overprintability, oxidation resistance, excellent opacity and exhibits an average metallic gloss. The HG-**AB series is available in metallic shades 75AB to 79AB.

The HG-**MG (Metalure) series offers good overprintability, oxidation resistance, high gloss, metallic effect and high-frequency weldability. The HG-**MG series is available in 75MG to 79MG.

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**OVERPRINTING:** For decorative application, or when exterior durability is not required, HG-E50 Clear may be used to overprint HG inks.
**NOTE:** For maximum exterior durability, an alternative product, OPC-190 Overprint Clear, is recommended. OPC-190 is specially formulated for use only as an overprint clear. If required, OPC-190 may be reduced with 5-15% by weight of ST-280 Overprint Clear Reducer.
**NOTE:** Pretest OPC-190 prior to use in production.

**COVERAGE:** When printed through a 230/in. (90/cm) mesh, one gallon of HG will cover approx. 1200 square feet.

**SCREEN MESH:** Typically 230-305/inch (100-120/cm) mesh. Finer meshes may be used for 4-Color Process printing. **Sun Chemical has the mesh best suited for your particular printing requirements. Contact your local Sun representative for details.**

**STENCIL:** Direct photo emulsion, capillary film, indirect stencils or solvent resistant stencil.

**SQUEEGEE:** Medium to hard durometer urethane squeegee. **Sun Chemical has the best squeegee for your particular application. Contact your local Sun representative for recommendations.**

**CLEANING:** HG inks can be removed from stencils and tools using universal cleaning agent URS or URS3. **Sun Chemical has a variety of wash-ups including ECO friendly screen washes available for your particular needs. Contact us for *all* of your pre and post-press chemical requirements.**

**HEALTH AND SAFETY:** As with all inks, gloves and safety goggles should be used when handling this product. For more complete information, refer to the relevant **Material Safety Data Sheets.**

| SunMatch™ Blending Colors: | | Standard Products: | | Process Colors: | |
|---|---|---|---|---|---|
| HG-Y30 | Primrose | HG-N501 | Opaque Black | HG-E180 | Euro Process Yellow |
| HG-Y50 | Golden Yellow | HG-W501 | Opaque White | HG-E181 | Euro Process Magenta |
| HG-O50 | Orange | OPC-190 | Overprint Clear | HG-E182 | Euro Process Cyan |
| HG-R20 | Scarlet | | | HG-TP | Transparent Paste |
| HG-R50 | Red | **Modifiers:** | | | |
| HG-M50 | Magenta | HG-V | Thinner | In accordance with information received from suppliers, the full HG series is formulated without heavy metals and complies with: 16 CFR, Part 1303; ANSI Z66.1-1964; ASTM F 963; CONEG packaging regulations; EC Packaging Waste Directive EC/94/62; EN71, section 3; RoHS 2002/95/EC; WEEE 2002/96/EC; E2003/11/EC. | |
| HG-V50 | Violet | HG-D | Retarder | | |
| HG-B50 | Blue | HG-VSP | Spray Thinner | | |
| HG-G50 | Green | ST-280 | Overprint Clear Reducer | | |
| HG-N50 | Blending Black | UV1 | Thinner/Retarder | | |
| HG-W50 | Blending White | UV2 | Thinner/Retarder | | |
| HG-E50 | Mixing Clear | UV4 | Thinner/Retarder | | |



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