HG Technical Data Sheet

HG screen printing inks are suitable for printing on all types of thermoplastics, especially acrylics, rigid and plasticized PVC, CAB.

typical characteristics and features

HG inks are formulated to have the following properties:

- Air dry or jet dry
- High gloss
- Mild odor
- Blending colors contain weather resistant pigments providing maximum lightfastness
- Excellent opacity

technical information and handling

Pigment 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 will be compromised.

Metallic inks

HG 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 need to be overprinted, recommend an additional 10–30%, HG-E50 to the metallic mixtures. In all cases, it is necessary 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. 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.

Product Code	Description	SAP Number
HG-Y30	SunMatch - Primrose	90061975
HG-Y50	SunMatch - Golden Yellow	90061977
HG-050	SunMatch - Orange	90061955
HG-R20	SunMatch - Scarlet	90061957
HG-R50	SunMatch - Red	90061958
HG-M50	SunMatch - Magenta	90061949
HG-V50	SunMatch - Violet	90061967
HG-B50	SunMatch - Blue	90061887
HG-G50	SunMatch - Green	90061948
HG-N50	SunMatch - Blending Black	90061951
HG-W50	SunMatch - Blending White	90061971
HG-E50	SunMatch - Mixing Clear	90061945
HG-N501	Opaque Black	90061953
HG-W501	Opaque White	90061973
OPC-190	Overprint Clear	90041681
HG-V	Thinner	90061964
HG-D	Retarder	90061938
HG-VSP	Spray Thinner	90061968
ST-280	Overprint Clear Reducer	90020024
UV1	Thinner / Retarder	90015181
UV2	Thinner / Retarder	90015285
UV4	Thinner / Retarder	90015336
HG-E180	Euro Process Yellow	90061941
HG-E181	Euro Process Magenta	90061942
HG-E182	Euro Process Cyan	90061943
HG-TP	Transparent Paste	90061961
HG-480	Transparent Yellow	90095282
HG-481	Transparent Red	90061800
HG-481/00	Transparent LED Red	90061801
HG-482	Transparent Blue	90061803
HG-482/00	Transparent Blue	90061804
HG-483	Transparent Violet	90061806
HG-484	Transparent Green	90061807
HG-484/20	Transparent Green	90061808
HG-484/22	Transparent Green	90061809
HG-485	Transparent Orange	90061810

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; EN71m section 3; RoHS 2002/95/EC; WEEE 2002/96/EC; E2003/11/EC.

HG Technical Data Sheet

Screen mesh

Recommend using screen mesh between 230–305 / inch (100–120 / centimeter) mesh. Finer meshes may be used for 4-color process printing.

Squeegee

Medium to hard durometer urethane squeegee should be used.

Compatibility

HG inks are compatible and inter mixable with specific screen inks for plastics, such as C32, C99 and JM ink series. The drying speeds and affect of mixed inks on the substrate will differ from HG.

Stencil

Direct photo emulsion, capillary film, indirect stencils or solvent resistant stencil can be used with HG inks.

Modification

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

Drying

HG inks air dry by evaporation of solvents. Drying time is approximately 10–15 minutes at room temperature or 30–60 seconds in a belt dryer at temperatures of approximately 104–122°F (40–50°C). Distortion of the printed material is reduced to a minimum due to quick evaporation of solvents. Drying speed can 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.

Substrates

HG can be used on:

- Thermoplastics
- Acrylics, rigid and plasticized polyvinyl chloride (PVC)
- CAB

coverage

One gallon of HG will cover approximately 1200 square feet, when printed through a 230 / inches (90 / cm) mesh.

cleaning

HG inks can be removed from stencils and tools, using any standard cleaning solvent or solution.

overprintability

HG for decorative application, or when exterior durability is not required, HG-E50 Clear can 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 can be reduced with 5 – 15% by weight of ST-280 Overprint Clear Reducer. Pretest OPC-190 prior to use in production.

storage considerations

If HG inks are stored in temperatues between 40° – 90°F (5 – 32°C), these coatings have a shelf-life of thirty-six (36) months.

safety, health and environment

HG inks should be used in accordance with normal standards of industrial hygiene and good manufacturing practice. Please refer to the supplied Safety Data Sheet for specific information. Safety Data Sheets will be supplied.

Printing inks, coatings and printing residues should be disposed of in accordance with local and national regulations.

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