



Silk Screen Inks

Products Information

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Universal Gloss Inks (UGI)

PROPERTIES

UGI is a two-pack screen ink with outstanding resistance to many chemicals and solvents and excellent adhesion to a wide range of difficult to adhere to substrates, such as metal (including aluminum, copper, brass, tin coated metal and iron), glass, ceramic, plastic, mirror, Bakelite, Formica, Acrylic, Polyethylene (PE), pretreated Polypropylene (PP), Nylon and some Polyester. UGI gives good adhesion to substrates coated with resin, silicone and wax. To improve adhesion, the substrate should be cleaned with Thinner 2900 before printing. UGI is not suitable for printing outdoor displays which require long term weather stability.

INSTRUCTIONS FOR USE

Thinning and Cleaning

- Stir well before use.
- UGI inks should be thinned 5-10% with Thinner 13019 before printing.
- Retarder 13018 or 139A can be used to make the ink dry more slowly when printing in a warm room or when using screens with high mesh counts.
- To Improve adhesion, the substrates should be cleaned with Thinner 2900 before printing.
- Cleaner C170 should be used to clean UGI from the screen. For heavy ink stains, Screensolve can be used. Please refer to the relevant P.I. Sheets for more information.

Catalyst

UGI is supplied in two parts: ink and catalyst. Before use, the ink and the catalyst should be thoroughly mixed together in the following ratio:

UGI Ink: UGI Catalyst = 5:1 by weight

UGI varnish: UGI Catalyst = 3:1 by weight

Once mixed, UGI has a pot life of only 6 hours. Therefore, only the required amount of ink should be catalysed.

Printing

- UGI can be printed through any type of mesh, but for the best printing results it is recommended that monofilament P90-48 to P120-34 or stainless steel mesh (230 -325 mesh count/inch) be used, depending on the detail required.
 - UGI can be printed through a variety of solvent resistant stencils, such as Diazol PU (220), and Diazol (S42).
 - 1Kg of ink will print an area of 20-26 m² through a P110-34 mesh.
 - A snap distance of about 2-3 mm is required for a good release of the print from the screen.
 - Apply Spray Way SW82 all over the print table to firmly hold the substrate in place during printing.
- Due to the wide range of substrates available, it is advisable that the ink be tested fully prior to printing.

Metallic Colors

UGI metallic inks can be obtained by mixing UGI090 varnish with silver powder or gold powder in the following ratio.

UGI090 varnish: Silver or Gold Powder = 3:1

UGI Metallic Ink should then be mixed with catalyst in the following ratio. **UGI metallic ink: Catalyst = 4:1**

After UGI is catalysed it will have a pot life of only about six hours. Therefore, only the required amount of ink should be mixed.

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Drying

UGI inks dry through solvent evaporation and are chemically cured by a reaction between the ink and the catalyst. It will dry in 1-2 hours at room temperature, depending on the conditions. UGI prints will reach optimum adhesion and chemical resistance after drying at room temperature for 4 days. To speed up the drying process of the ink and increase adhesion and weather resistance, the printed substrate should be cured as follows:

Drying Temperature	Drying Times	
	Conventional Oven Stoving	Long/Medium Infrared Stoving
150°C/300°F	5-8 minutes	3-6 minutes
120°C/250°F	10-15 minutes	5-15 minutes
80°C/175°F	20-30 minutes	10-15 minutes

For short wave infrared stoving, the ink will dry in about 10-30 minutes.

Chemical and Solder / Heat Resistance

When completely dry, UGI will be resistant to chemicals such as acids, alkalis, solvents, lubricants, cosmetics, detergents and other household products. UGI has solder/heat resistance and can be used for printing the back of PCBs to identify the component location according to BS9762 and BS9763.

Solvents

13019 Thinner
13018 Retarder
139A Retarder Slow
SWT139S Cleaner

STORAGE

UGI inks should be stored in a sealed container between 5-25°C.

SAFETY AND HANDLING

UGI inks should be used with care. Wear suitable PPE, for example, appropriate gloves and safety glasses.

All colors comply with the following standards: Standard of the European Economic Community, the United Kingdom Toys (Safety) Regulation 1974, the Standard of Germany and French Toys Standard.

UGI inks are flammable and have a flash point at 57°C/135°F.

Whilst working with the ink, the consumption of food and drink, and smoking are not recommended.

ENVIRONMENTAL INFORMATION

UGI Inks:

- Are formulated free from ozone depleting chemicals as described in the Montreal Convention.

TECHNICAL SERVICE AND INFORMATION

For further information or other relevant data, please do not hesitate to contact us. Sabinecolors has a team of well-trained personnel who are ready to give help and advise regarding product information and application.