

TRIANGLE®

GSP

UV & LED curable pigmented inks

Technical Data Sheet

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GSP

INX Digital International Co.'s GSP ink is a premium UV and LED curable high density pigmented inkjet ink set formulated for use in the VUTEK® GS™ Series printers, especially for those customers requiring adhesion to a wide variety of digital graphic media.

Triangle's **GSP** inks are optimized for adhesion and curing, both UV and LED, on the VUTEK® GS™ series printers. They are Chemically compatible with the various OEM ink sets and produce a comparable Color Gamut to the OEM inks sets. **GSP** is formulated to have excellent adhesion and flexibility on a wide array of digital rigid graphic media, including Coroplast. These inks are intended for jetting with high consistency on the VUTEK® GS™ Series of printers.

- ▼ Better adhesion to a wide variety of media especially Coroplast®
- ▼ More flexible ink reduces chipping and peeling when cutting rigid media
- ▼ Color comparable to the OEM
 - Will hit GRACOL standards
 - Will hit G7 targets
- ▼ Eco-friendly bag-in-box packaging minimizes waste
- ▼ Compatible chemically for easy of conversion
- ▼ UV & water resistant without coating or lamination

Packaging

- ▼ 2 x 5 liter bag in box. Net quantity 10 liters.
- ▼ 9 Colors



Recommended Flush

UV Head Conditioner – Monomer-based flushing fluid also used for head wiping.

Warning: GSP has limited compatibility with solvents. Adding solvents for any extended period of time into the ink train may cause premature curing.

Outdoor Durability

GSP inks are designed for outdoor use and, with a suitable substrate and correct ink application, should withstand 1-2 year exposure. Laboratory tests passed the 2-year outdoor durability criteria (delta E of <10 using accelerated testing equipment).

Temperature Exposure & Jetting

NO Temperature adjustments required during conversion. Inks can be used in jetting equipment with temperatures up to 60°C. Prolonged exposure to temperatures above 55°C, however, should be avoided as long term exposure to high temperatures can induce premature polymerization.

Curing Information

GSP curing dosage is 60mJ/cm² with UVA (320-390 nm) using H-Bulb. INX Digital Testing conditions are as follows:

- Fusion LC6B Benchtop Conveyor with a Light Hammer 6 Curing System with an H-Bulb.
 - Focal point of the lamp to the substrate is 2 inches.
 - Inks are tested at a standard thickness of 9 microns on standard self adhesive vinyl (SAV). Each customer must determine the appropriate radiant energy necessary to achieve complete cure. It is dependent on their conveyor speed, distance from the curing lamp, thickness of ink, color of ink, type of bulb (H, D, V or LED) and its irradiance, as well as environmental conditions.
 - EIT Power Puck II radiometer to measure the irradiance and the energy density at four different UV bands (A, B, C and V).
- GSP** also cures using a standard LED lamp with a wavelength of 395 nanometers.

Flexibility & Adhesion

GSP inks are formulated to achieve optimum adhesion on commonly used flexible and rigid display graphics media, including Coroplast and acrylic. Certain display graphics media types such as polyethylene and other non-ionic surfaces can be problematic, so the customer should test these materials prior to conversion.

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Incompatible Solutions

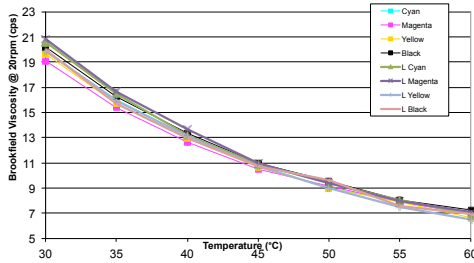
GSP is NOT compatible when exposed to solvents for prolonged periods of time. Certain solvents may cause premature curing of the inks within the ink train and print head. If there is solvent installed prior to the ink conversion, this solvent will be removed and no solvent will be installed as part of the ink train when converting to **GSP** inks.

Ink Storage and Shelf Life

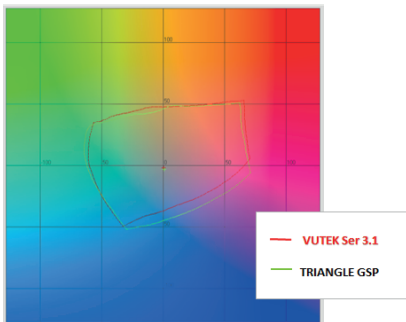
These inks should be stored between 20° - 25°C (68° - 77°F). When stored properly inks have a 12 month shelf life.

*White ink will need agitation before placing into printer and during the use in ink train.

Viscosity Ladder



Color Gamut Map

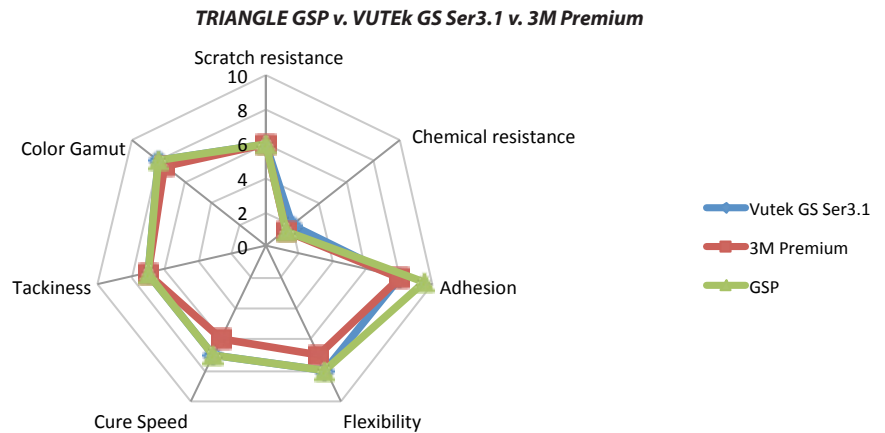


Typical Physical Properties

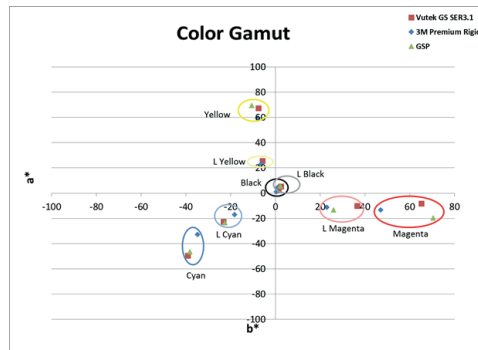
PROPERTIES	RANGE
Viscosity (cps)	24 - 25
Surface Tension	10.5 - 11

Property Gamut

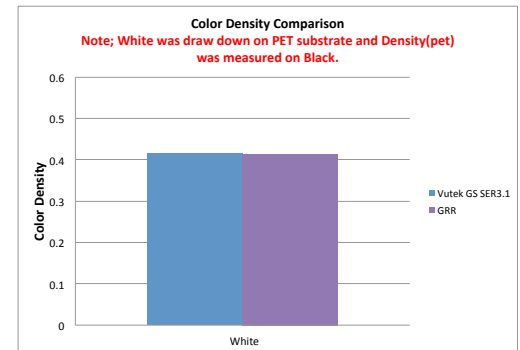
The spider chart below compares the properties of the TRIANGLE® GSP ink series against those of the VUTEK® GS™ Ser 3.1 and 3M Premium series inks for the VUTEK® GS™ series printers.



Color Gamut



Color Density



*Conditions apply. This information has been carefully studied from experience gained in the laboratory and under commercial situations. It is subject to change without notice. All sales are subject to our standard terms and conditions of sale. Since applications vary tremendously, the user assumes the obligation to test this product in their specific situation to determine its suitability and assumes all risk and liability related to such use. INX International Ink Co. makes no warranty, express or implied, for the use of the product for any particular application. In no event shall INX International Ink Co. be liable for damages in excess of the original cost of the product nor shall INX International Ink Co. be liable for any special or consequential damages. **Coverage was calculated using actual figures obtained from a print shop. Coverage depends on the file being printed and printer settings. GSP is not endorsed by VUTEK®. VUTEK® GS™ names and copyrighted materials are the property of Electronics For Imaging, Inc., Foster City, CA.

