

Renegade GP is a high performance, fast curing, UV screenprinting ink specifically formulated for point of purchase applications. GP Series provides printers an ink system for multiple uses of a wide variety of substrates. Renegade GP offers opacity and high gloss while maintaining rapid cure rates. GP provides a durable, high slip surface with excellent outdoor durability.

Version 1.02.21.2006

Performance Properties

- Adhesion to wide variety of substrates
- Superior opacity for color trapping
- Non-blocking, high-slip finish for easy handling
- Superb water and abrasion resistance
- Flexible for multi-layer applications/die-cutting
- N-VP and heavy metal free
- Compatible with Uniprint UP Series Inks

Printing

Mix well prior to use. While supplied in press ready condition, GP may be reduced up to 10% with #1004 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.

Coverage

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

Curing

Ink will cure well when printed through 355 (140cm) plain weave polyester mesh or finer. GP's optimal cure window of 125-150 mJ / 550-650 mW is generally achieved with one 200 watt per inch mercury vapor lamp at belt speeds between 70-90 feet per minute (21-27m/min). This should provide thorough cure of the product. 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 six 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% GP Mixing/Overprint Clear will increase light penetration and improve cure.

Even though the cured ink film has been engineered to optimize processing and handling, the printer must assume responsibility for pre-testing and qualifying the parameters for stacking printed parts prior to each run.

The intensity of cure, weight or caliper of the material and/or elevated ambient temperatures and humidity of the printing and storage environments will influence block resistance.

Recommended Substrates

- Pressure Sensitive Vinyl
- Top Coated and Print Treated Polyesters
- Polystyrene
- ABS
- Polycarbonate
- Rigid Vinyl
- Coated and Uncoated Paper
- PETG
- Polyethylene Coated Card Stock
- Expanded Foam PVC (Sintra®, Celtec®)
- Foam Board
- Acrylic
- Fluted Polyolefins*, Polyethylene Sheet*

*With the use of Adhesion Promoter (3% of 1534 or 3% 11939), Renegade will adhere to fluted polyolefins such as Coroplast® and polyethylene sheet. Best adhesion forms after a six (6) hour post cure. The modified ink's shelf life is at least 3 days. Either adhesion promoter provides excellent water resistance.

Lightfastness

GP is lightfast up to three (3) years with a 355/inch or coarser mesh. Weathering tests have been completed on 4-mil vinyl printed with GP Series. The ink withstood 1500 hours of exposure with 4-hour cycle times of light and condensation at elevated temperatures with minimal color change and no shrinkage. Overprinting with #6918 Solar Shield Clear, greatly improves outdoor performance. Accelerated machine weathering are reference standards and can not precisely reproduce actual outdoor performance. Based on prior correlation of accelerated testing versus real time exposure, 500 hours is equated to approximately one year, 45° south Florida.

The use of premium grade, calendared vinyl films are recommended for all applications intended to weather up to three (3) years.

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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 use, 280-305 (110-120cm) plain weave mesh. Use Solar Shield Clear for extended weatherability and to improve the non-tarnishing properties of the product.

Additives

- 1004 Thinner up to 10% as needed
- 13973 Cling Modifier at 2% as needed
- 1534 Adhesion Promoter up to 3% as needed
- 11939 Adhesion Promoter, 3-5% as needed
- 2980 Catalyst, 3% as needed (will gel in 4 hours)

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, halftones are available in a range of density levels. Additional control of density may be achieved with use of GP 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	Backlit Density
GP Halftone Yellow	0.90	1.10	1.35
GP Halftone Magenta	1.40	1.75	2.05
GP Halftone Cyan	1.40	1.80	2.20
GP Halftone Black	1.60	2.00	2.25

Color Availability

Renegade GP is available in twenty opaque standard colors. Custom matches, metallic, fluorescent and transparent colors are obtainable upon request.

GP-101 Primrose Yellow	GP-210 Ultra Blue
GP-111 Lemon Yellow	GP-220 Emerald Green
GP-123 Medium Yellow	GP-225 Forest Green
GP-131 Brilliant Orange	GP-226 Lime Green
GP-135 Vivid Orange	GP-235 Teal
GP-141 Fire Red	GP-240 Purple
GP-151 Scarlet Red	GP-260 Brown
GP-155 Rubine Red	GP-301 Opaque Black
GP-160 Rhodamine Red	GP-311 Opaque White
GP-180 Warm Red	GP-312 Dense Black
GP-190 Process Blue	GP-026 Brilliant White
GP-200 Peacock Blue	GP Mixing/Overprint Clear
GP-205 Reflex Blue	GP 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.

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

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