Amplifi LFI UV Ink

UV ink for multiple P.O.P. substrates

Amplifi LFI UV Ink

THINNING

Stir well before every use. Amplifi LFI inks are supplied in a press ready condition for most printing applications. For certain printing conditions it may be necessary to thin slightly (3-5% with LFI-TH Thinner).

MESH

Amplifi LFI prints and cures well through 355-380 (140 to 150/cm) plain weave monofilament polyester. For optimum flexibility, every endeavor should be made to minimize ink film thickness.

STENCILS

Stencil materials must be solvent resistant and produce a thin film stencil (3-6 microns over mesh).

Amplifi LFI UV Ink Features

The main features are:

- Wide Adhesion Range
- Excellent Adhesion to Highly Plasticized Vinyls
- Fast Cure Speed
- Extreme Water Resistance
- Ideal for In-Line Presses
- Superior Flexibility
- Low Viscosity Rheology
- Excellent Block Resistance
- Highly Flexible including Multi-Layer Applications
- Identical Pigmentation has been used for Amplifi LFI & AMP SMS toners for blended color consistency

CURING

Ultraviolet curable inks are dependent on a high dosage of intense ultraviolet light in a spectral range between 250 and 360 nanometers to initiate cure. Light energy must penetrate the entire ink layer to achieve proper cure and ink performance.

If under-cure is experienced with any color, demonstrated through a wet film or loss of gloss, it is usually due to excessive ink deposit. To correct this, the mechanics, such as mesh, squeegee, color density, belt speed, or the amount of UV energy, must be changed.

Reduction of color density is easily achieved by letting the color down with MX (Mixing Clear) until proper cure is obtained.

Adhesion should be at least 80% immediately out of the reactor with final adhesion developing in two to four hours. If total cure on a given substrate with a specific color needs to be established, the piece should be passed through the reactor one or two more times. This will usually simulate final adhesion.

COVERAGE

Standard line colors should yield a coverage of 2,800 to 3,500 square feet/gallon (64 to 80 m²/liter) depending on film thickness.

WASH UP

Wash up on press with press washes and after the production run with ink degradents.

COLOR AVAILABILITY

The Amplifi standard color range includes the nine base Seritone Matching System (SMS) colors, standard colors, halftone colors and extended life colors.

POST PRINT RECOMMENDATIONS

Success of post printing processes such as hemming, sewing, and/or grommetting is very ink film thickness related. Thin ink films (10 to 15 micron) are more flexible and will, therefore, be more successful in these finishing processes.

PRE-PRODUCTION TEST

It is strongly recommended that all substrates be tested before use as supposedly similar substrates can vary between different manufacturers and even between different batches from the same manufacturer. Certain other plastics may be impregnated with lubricants which, like plasticizer migration, may impair adhesion and block resistance even a considerable period after printing. Other plastics can become brittle or caused to curl after printing.

END-USER MUST DETERMINE SUITABILITY OF THIS PRODUCT FOR THE INTENDED USE PRIOR TO PRODUCTION.

OUTDOOR USE

Accelerated weathering tests indicate that Amplifi (LFI) prints exhibit an exterior life of up to two years in a temperate climate, with the exception of LFI-064, 066, 114, 121, HTM, HTY, IHM, IHY, where color deterioration was evident within the two years time frame. Color matches intended for outdoor use over 120 days should not contain LFI-064, 066, 114, 121, HTM, HTY, IHM or IHY. Consider LFI-864, 866, 814, 821, PHTM, PHTY, PIHM or PIHY for exterior life of up to two years.

THE SERITONE MATCHING SYSTEM

The Seritone Matching System has been designed to enable printers to readily simulate PANTONE®* and most other colors in-house. The system consists of nine SMS base colors, each of which has been selected for its cleanliness of tone and suitability for intermixing. Using the SMS base colors plus Shading Black, Tinting White and Mixing Clear, almost any color can be produced.

*Pantone, Inc's check-standard trademark for reproduction and color reproduction.

SPECIFICATIONS:

AMPLIFI LFI UV INK

Media Type

- Polystyrene
- Coated Paper and Board Stocks
- Premium & Economy Vinyl Banner Materials
- Most Static Cling Vinyls
- Pressure Sensitive Vinyls

- **Light energy level requirements vary from ink to ink and are dependent on a number of factors:**
  - Ink chemistry
  - Color
  - Ink deposit (film weight)
  - Substrate being printed
  - Halftone or line color

For Amplifi the following guidelines are recommended:

"LFI" Halftone Inks – 380.34PW Mesh

- Minimum millijoules–100 mJ/cm2–measured at the UVA component
- Minimum milliwatts-500 mW/cm2-measured at the UVA component

Line Colors-355.34PW Mesh

- Minimum millijoules- 125 mJ/cm2-measured at the UVA component
- Minimum milliwatts-500 mW/cm2-measured at the UVA component

STANDARD HALFTONE COLORS

Amplifi LFI standard halftone colors comply with the ISO 2846 color standard. ISO 2846 establishes specifications for color and transparency of four-color process ink for four-color printing. Amplifi LFI halftone inks are ISO 2846 compliant as recommended when using the G7 color process control method. The densities are slightly higher than SWOP (Specification Web Offset Publication) under most conditions and, therefore, offer scope for adjustment with the addition of halftone extender base.

Amplifi LFI halftone inks print with a superior low dot profile and hold the dot structure over long press runs.

INTENSE HALFTONE COLORS

Amplifi LFI intense halftone colors are considerably higher in density than "SWOP" standards. Reduction of color density is easily achieved by letting down the color with LFI-HTX for "LFI" Halftones (Halftone Base) until proper density is obtained.

METALLIC POWDERS

Metallic powders may be mixed with Amplifi LFI Mixing Clear (LFI-MX). The recommended mixing ratios are 8% by weight of silver powder and 20% of gold powder. Due to the possibility of chemical changes after mixing, it is highly recommended that metallic shades be mixed daily.

THINNERS/MODIFIERS

Amplifi LFI colors are supplied at a press ready viscosity for most printing applications. It may be necessary to thin slightly (3%-5%) with LFI-TH for special applications. Amplifi LFI Mixing Clear (LFI-MX) may be used to reduce the strength of a color with minimal effect of viscosity. Flattening paste (GSG-FP) may be used to a maximum of 25% as needed.

STORAGE

Containers should be tightly closed immediately after use. At the end of long printing runs, surplus ink from the screen should be disposed of. Amplifi LFI inks and reducers should not be stored in direct sunlight or extreme temperatures. Refer to Safety Data Sheet (SDS) for materials and conditions to be avoided. In the interest of maximum shelf life, storage temperatures should be between 50°F (10°C) and 77°F (25°C). When stored under these conditions the maximum shelf life is shown by the use by dates, which are clearly marked on all ink containers.

SAFETY AND HANDLING

Refer to SDS for safety, handling, waste disposal and regulatory information. All colors have been formulated to contain no pigments which contain lead or other heavy metals. These products are formulated to meet CONEG Packing Legislation and ROHS Electrical and Electronic Equipment Directive. If necessary, certification of lead and heavy metals content can be obtained from an independent laboratory.

The information and recommendations contained in this Technical Data Sheet, as well as technical advice otherwise given by representatives of our Company, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary. For the same reason our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that they will meet fully their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Technical Data Sheet out of date and users are requested to ensure that they follow current recommendations.

SPECIFICATIONS:

AMPLIFI LFI UV INK

Seritone Matching System Colors	
▶ 900113973 LFI-064	Yellow GS
▶ 900113974 LFI-066*	Yellow RS
▶ 900115488 LFI-866	EL Yellow RS
▶ 900114986 LFI-114*	Orange
▶ 900115485 LFI-814	EL Orange
▶ 900114987 LFI-121*	Red YS
▶ 900115486 LFI-821	EL Red YS
▶ 900114988 LFI-127	Violet
▶ 900114989 LFI-164*	Red BS
▶ 900115487 LFI-864EL	Red BS
▶ 900113975 LFI-230	Blue GS
▶ 900113976 LFI-325	Green
Standard Colors	
▶ 900115001 LFI-TW	Tinting White
▶ 900115002 LFI-SB	Shading Black
▶ 900115003 LFI-301	Black
▶ 900115004 LFI-311	White
▶ 900115005 LFI-141	Fire Red
▶ 900115006 LFI-205	Reflex Blue
Halftone Colors	
▶ 900113382 LFI-HTC	Halftone Cyan
▶ 900113383 LFI-HTM*	Halftone Magenta
▶ 900115489 LFI-PHTM	Premium HT Magenta
▶ 900113384 LFI-HTY*	Halftone Yellow
▶ 900115490 LFI-PHTY	Premium HT Yellow
▶ 900113385 LFI-HTK	Halftone Black
▶ 900113386 LFI-HTX	Halftone Base
Intense Halftone Colors	
▶ 900113370 LFI-IHC	Intense HT Cyan
▶ 900113391 LFI-IHM*	Intense HT Magenta
▶ 900115521 LFI-PIHM	Prem. Intense HT Magenta
▶ 900113392 LFI-IHY*	Intense HT Yellow
▶ 900115522 LFI-PIHY	Prem. Intense HT Yellow
▶ 900113393 LFI-IHK	Intense HT Black
Reducers/Modifiers	
▶ 900115791 LFI-TH	Thinner
▶ 900096705 GSG-FP	Flattening Paste
Gloss Overprint Clear	
▶ 900097489 UX-OP	Gloss OP Clear

* Color matches and finished prints intended for outdoor use over 120 days should contain LFI-814, 821, 864, 866, PHTM, PHTY, PIHM, PIHY

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