

Amplifi AMP UV Ink

Gloss UV ink

for high density
polyethylene sheet and banner,

**polystyrene,
polypropylene**

and
corrugated plastics

Amplifi AMP UV Ink

THINNING

Stir well before every use. Amplifi AMP 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 AMP-TH Thinner).

MESH

Amplifi AMP 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 AMP UV Ink Features

The main features are:

- Press Ready
- Fast Cure Speeds
- Excellent Block Resistance
- Superior Water Resistance
- Good finishing properties – cutting, creasing, folding
- Gloss Finish
- Excellent Flexibility and Intercoat Adhesion
- Superior Printability for Large Format Work
- Very Wide Adhesion Range
- Identical Pigmentation has been used for Amplifi AMP & LFI SMS toners for blended color consistency

CURING

Ultraviolet cure (UV) inks are dependent on a high dosage of ultraviolet light to initiate cure, the process that converts the ink from a wet to a dry film. The light must, in effect, see through or penetrate the layer of ink to achieve proper cure.

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 one-half hour 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 coverage of 2,800 - 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.

PRE-PRODUCTION TESTS

Amplifi AMP has been formulated to adhere to most polyethylene and some polypropylene substrates with surface tension levels of 38 dyne/cm or higher. However, 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 manufacturers. Certain 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 Amplifi AMP has an exterior life of up to two years on rigid stocks in a temperate climate. Some rigid fluted stocks degrade rapidly in high humidity and sun exposure environments. To optimize ink adhesion under these conditions, add 3-5% by weight PN-WRA. Once catalyzed, the ink has a four to six hour pot life.

Note the exception of AMP-064, 066, 114, 121, HTM, HTY, IHM and IHY, where significant color deterioration was evident within the one year time frame. Color matches intended for outdoor use over 120 days should not contain AMP-064, 066, 114, 121, HTM, HTY, IHM, IHY. Consider AMP-864, 866, 814, 821, PHTM, PHTY, PIHM or PIHY for exterior life of up to two years.

SPECIFICATIONS:

AMPLIFI AMP UV INK

Media Type

- ▶ High Density Linear Polyethylene Sheet
- ▶ Coroplast® Cor-X®, and other Fluted Polyethylene/Polypropylene Stocks
- ▶ Polystyrene
- ▶ Many Rigid Plastics
- ▶ Polyethylene Banner

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 AMP the following guidelines are recommended:

AMP 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

Seritone Matching System Colors

- ▶ 900114956 AMP-064 Yellow GS
- ▶ 900114936 AMP-066* Yellow RS
- ▶ 900114955 AMP-866 EL Yellow RS
- ▶ 900114937 AMP-114* Orange
- ▶ 900114952 AMP-814 EL Orange
- ▶ 900114938 AMP-121* Red YS
- ▶ 900114953 AMP-821 EL Red YS
- ▶ 900114939 AMP-127 Violet
- ▶ 900114940 AMP-164* Red BS
- ▶ 900114954 AMP-864 EL Red BS
- ▶ 900114991 AMP-165 Magenta
- ▶ 900114992 AMP-230 Blue GS
- ▶ 900114993 AMP-325 Green

Standard Colors

- ▶ 900114994 AMP-TW Tinting White
- ▶ 900114995 AMP-SB Shading Black
- ▶ 900114996 AMP-301 Black
- ▶ 900114997 AMP-311 White
- ▶ 900114998 AMP-141 Fire Red
- ▶ 900114999 AMP-205 Reflex Blue
- ▶ 900114943 AMP-MX Mixing Clear

Halftone Colors

- ▶ 900113977 AMP-HTC Halftone Cyan
- ▶ 900113978 AMP-HTM* Halftone Magenta
- ▶ 900114944 AMP-PHTM Premium HT Magenta
- ▶ 900113979 AMP-HTY* Halftone Yellow
- ▶ 900114945 AMP-PHTY Premium HT Yellow
- ▶ 900113980 AMP-HTK Halftone Black
- ▶ 900113981 AMP-HTX Halftone Base

Intense Halftone Colors

- ▶ 900113982 AMP-IHC Intense HT Cyan
- ▶ 900113983 AMP-IHM* Intense HT Magenta
- ▶ 900114946 AMP-PIHM Prem. Intense HT Magenta
- ▶ 900113984 AMP-IHY* Intense HT Yellow
- ▶ 900114947 AMP-PIHY Prem. Intense HT Yellow
- ▶ 900113985 AMP-IHK Intense HT Black

Reducers/ Modifiers

- ▶ 900115790 AMP-TH/1 Thinner
- ▶ 900096705 GSG-FP Flattening Paste

Gloss Overprint Clear

- ▶ 900096706 GSG-GOP Gloss OP Clear

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

COLOR AVAILABILITY

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

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.

STANDARD HALFTONE COLORS

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

INTENSE HALFTONE COLORS

Amplifi AMP Intense Halftone colors are considerably higher in density than SWOP standards. Reduction of color density is easily achieved by letting down the color with AMP-HTX (Halftone Base) until proper density is obtained.

THINNERS / MODIFIERS

Amplifi AMP colors are supplied at a press ready viscosity for most printing applications. It may be necessary to thin slightly (3%-5%) with AMP-TH for

cylinder presses or special applications. Amplifi AMP Mixing Clear (AMP-MX) may be used to reduce the strength of a color with minimal effect on viscosity.

When printing on low dyne or questionable substrate an addition of PN-WRA may be necessary to achieve proper adhesion. PN-WRA should be added 3% to 5% by weight, and once mixed, has a pot life of four to six hours. Unused ink with PN-WRA should be properly disposed of as outlined in the SDS.

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 AMP 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.

High temperature storage/shipment of prints may have an adverse effect on block resistance

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.

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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.

THE NAZDAR GREEN POLICY

We at Nazdar believe that "sustainable development" of the Earth, mankind, and companies in the 21st century is an issue that must be addressed with the highest priority. As a socially responsible corporation, we actively undertake corporate activities with our environmental values in mind. We strive to be a dedicated steward of the environment and assist our customers and corporate partners in doing the same.