ARIA UV ES *Series* is a specialty UV screen printing ink, formulated to be used on highly plasticized vinyl. Generally, the adherence on these substrates is dramatically affected by the migration of the plasticizer. The final results are dependent on the type of the vinyl.

SUBSTRATES

ARIA UV ES *Series* exhibits excellent adhesion on the following substrates:

Tyvek
Vinyl – Auto-Adhesive
Vinyl – Banner
Vinyl – Static Cling

We recommend the **UV ES** *Series* ink to be used on the substrates which it was formulated for. This ink has also an excellent adhesion on self adhesive vinyl and, when printed multilayer, it do not weaken the material. For optimum results, it is very important to minimize the ink deposit, in order to preserve the flexibility of the printed job.

Due to the unlimited types and nature of the substrates presently used in screen printing, some of which could be beyond the control of our laboratory, we strongly recommend that complete tests of adherence and other particular requirements to be performed by the end user prior to production. Aria stands behind the quality of its products. However, Aria cannot guarantee final results since Aria has no control over individual operating conditions and production procedures. Clients are solely responsible to test Aria's products to determine if they perform ex expected during the printed item's entire life cycle from printing to end of the item's life. Any liability associated with the use of this product is limited to the value of the product purchased from Aria.

PRINTING PARAMETERS

Screen: Screens made from a monofilament polyester fabric, plain weave, having 350 to 420 mesh and 31/34 micron thread are recommended. Particular attention is to be paid to the film thickness.

Squeegee: A polyurethane squeegee of 75-85 duro is recommended. As it was already mentioned, the angle of the squeegee, its sharpness, its pressure and the off-contact are some of the related parameters which must be correctly adjusted in order to obtain optimum performance.

Stencil: Direct emulsions or thin capillary films that are UV compatible and solvent resistant are recommended.

Coverage: A medium value of 3500 square feet per gallon could be expected. This value is influenced by the film thickness and the absorbent properties of the substrate.

CURING PARAMETERS

ARIA UV ES *Series* is a "press ready" UV ink. It will cure under a normal medium pressure mercury lamp, having 300W/in output. Nevertheless, a relatively high intensity of the lamp is required (approx. 300-400 mW/cm2), as well as a minimum IR output and an efficient cooling system. *Any additional photo initiator or other curing promoting agent is not required to be added to the ink to cure it in normal conditions.* We underline that the common idea that additional quantities of photo initiators will automatically enhance the cure speed do not always correspond to the reality. A screening effect could occur, having as consequence a lack of through cure, lack of adhesion and brittleness of the final film.

INK MODIFIERS

UV **FBG7000** *Mixing Clear* can be used in any proportions to reduce the intensity of plain colors. UV **FBH7000** *Mixing Clear* is to be used to adjust the optical density of process colors.

For particular needs, the viscosity of the ink can be reduced by the addition of 5-10% of **ARIA UV** *Reducer* **FSESRED**.

ADDITIVES

ARIA UV ES *Series* exhibits excellent adhesion properties on the mentioned substrates without the use of adhesion promoter.

AVAILABLE COLORS

UV ES *Series* inks are available in the following color systems: ARIA Standard Printing Colors, Matching System Base Colors, Standard and High Density Density Halftone Colors.

Note: Guide matching formulas based on ARIA Standard Printing Base Colors are available for all colors of Matching System.

Standard Printing Base Colors	Code	Color Matching System Base Colors	Code
Primrose Yellow	200	Yellow	201P
Lemon Yellow	210	Yellow 012	202P
Medium Yellow	220	Orange 021	301P
Orange	300	Warm Red	506P
Dark Orange	310	Red 032	507P
Fire Red	500	Rubine Red	508P
Bright Red	505	Rhodamine Red	509P
Magenta	605	Purple	701P
Violet	720	Violet	702P
Blue	805	Blue 072	803P
Green	900	Reflex Blue	804P
Black	051	Process Blue	805P
Mixing White	030	Green	903P
S/O White	002		
Mixing Black	051		
S/O Black	052		

Also Available Colors

Brilliant Red	510	Peacock Blue	800
Permanent Red	530	Brilliant Blue	820
Cerise	600	Royal Blue	830
Opaque Magenta	610	Emerald Green	910
Opaque Violet	700	Forest Green	920

Fluorescent Colors

Fluo Chartreuse	105	Fluo Cerise	130
Fluo Orange Yellow	110	Fluo Pink	135
Fluo Orange	115	Fluo Magenta	140
Fluo Orange Red	120	Fluo Blue	145
Fluo Red	125	Fluo Green	150

Standard and High Density
Halftone Colors   Code

Halftone Yellow	H200/H204
Halftone Magenta	H600/H604
Halftone Blue	H800/H804
Halftone Black	H051/H054

Metallic Colors

Metallic colors are recommended to be printed through 305 or 355 plain wave monofilament polyester screens. For silver colors, aluminum powder (8-10% by weight) is to be used, whereas for gold colors, bronze powder (15% by weight) is to be used. Due to chemical reactions between the metallic powders and UV bases, the viscosity and the color properties of the metallic inks may change. Therefore we recommend premixing only the quantity that is to be used in the next 4-5 hours.