

ARIA UV A40 Series is a premium multi-purpose UV screen printing ink, formulated on the base of the latest developments in the field of UV curing products. Extremely versatile, this ink responds to the most exigent requirements of the end users: excellent adhesion on a large variety of substrates, high cure speed, improved flexibility, excellent inter-coat adhesion and excellent image reproduction properties.

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 as 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.

SUBSTRATES

ARIA UV A40 Series exhibits excellent adhesion on the following substrates:

ABS

Acrylic**

Coroplast (*without adhesion promoter*)

Foamcore

Metal – Acrylic Coated

Paper/Cardboard

PET/PETE/PETG

Polycarbonate*

Polyester*

Polyethylene Containers

Polyolefins

Polypropylene Synthetic Paper (MXN)

Polystyrene

Tyvek*

Vinyl – Auto-Adhesive

Vinyl – Banner*

Vinyl – Rigid

**Some materials*

*** Need catalyst*

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

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 A40 Series is a "press ready" UV ink. Any additional photo initiator or other curing promoting agent is not required to be added to the ink to cure it in normal conditions. This ink exhibits exceptional fast cure speeds at low values of UV energy. A regular medium pressure mercury vapor UV lamp is recommended. For optimum performance the output of the lamp has to be above 200 mJ/cm² and 300 mW/cm². 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 **FBG0040** *Mixing Clear* can be used in any proportions to reduce the intensity of plain colors.

UV **FBH0040** *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 DHL 131**.

ADDITIVES

ARIA UV A40 Series exhibits excellent adhesion properties on the mentioned substrates without the use of any adhesion promoter. The end user has to pretest the ink for the intended application prior to production.

AVAILABLE COLORS

UV A40 Series inks are available in the following color systems: ARIA Standard Printing Colors, Matching System Base Colors, Standard 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 |
| | | Green | 903P |
| Mixing White | 030 | | |
| Mixing Black | 051 | | |

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 Density

| Halftone Colors | Code |
|------------------------|-------------|
| Halftone Yellow | H200 |
| Halftone Magenta B/S | H600 |
| Halftone Magenta R/S | H601 |
| Halftone Blue | H800 |
| Halftone Black | H051 |

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.