

# Arrowstar<sup>®</sup> Hard Surface Ink Series

Designed for printing on the widest range of non-porous substrates

Arrowstar Hard Surface inks are designed for printing on the widest range of non-porous substrates. These inks are formulated from a state of the art resin system and a combination of renewable vegetable oils which together provide excellent drying and film forming characteristics. Arrowstar Hard Surface inks are environmentally responsible and exhibit extremely low VOC levels (<5%).

## Product Features

- Excellent lithographic performance
- Complimented by a full mono-pigmented blending range, which also contains light-fast and permanent variants
- Environmentally responsible and exhibit extremely low VOC levels

## Advantages of Arrowstar<sup>®</sup> Hard Surface

- Low VOCs
- Fast oxidative drying
- Excellent adhesion properties
- Vegetable oil based
- Superior ink and water balance

# Arrowstar® Hard Surface Ink Series

## Arrowstar™ Hard Surface Process Colors

Color	Light fastness 100% Strength*	100% Strength 10% Tint*	Alkali**	Alcohol*	Nitro (solvents)**
<b>Black</b>	<b>8</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Cyan</b>	<b>8</b>	<b>7-8</b>	<b>5</b>	<b>5</b>	<b>5</b>
<b>Magenta</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>3-4</b>	<b>5</b>
<b>Yellow</b>	<b>5</b>	<b>4-5</b>	<b>5</b>	<b>3-4</b>	<b>5</b>

Color properties comply with ISO 2846-1  
(\*Blue Wool scale, 1=minimum, 8=maximum)  
(\*\*Resistance properties in accordance with the  
Grey scale according to ISO 105-A03 or ISO  
105-A02 1 = poor, 5 = very good)

Blending base series available

### Substrates

Ideally suited for use in conjunction with a wide range of non-porous substrates\*: Lenticular, Poly-art, In-mold label, Label lyte, Polypropylene, Styrene, PVC and numerous metalized

### Printability

When printing on non porous substrates the following recommendations should be observed:

- Minimum dampening to reduce the chances of over emulsification and the effects that may have on the ink drying.
- Care should be taken to ensure the ink does not skin in the ink fount or on the roller train over prolonged periods. The minimal use of an approved anti-skin spray is permitted during long press runs.
- Where permitted, use of alcohol in the fountain solution may be advantageous to ink drying.
- If all of the inks are not printed in-line, the time between overprinting additional colors should be minimized to avoid trapping issues.
- Printing low lifts (low piles) and the use of an appropriate spray powder is recommended.

### Remarks

\*In order to eliminate the chances of adverse interactions between ink and substrate, it is always recommended that ink drying is evaluated on the respective substrate prior to a production run. All substrates should have a minimum surface energy of 38 dynes /cm<sup>2</sup>.

Arrowstar Hard Surface inks comply with DIN ISO 2846-1 as required for printing to ISO 12647. They are also formulated in accordance with CEPE "Guide to Materials and Substances for Exclusion from Printing inks and Related Products"; EC Directive 94/62/EC - Packaging Directive in respect of Heavy Metal Content

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