

## **Water Based Wet & Reveal Ink**

### **Technical Product Information**

**Metachromatic Function:** Reversible

**Product Name:** Water Based Wet & Reveal Type P Screen Ink

**Last Revision:** 02/08/2019

#### **Description**

A water based ink for paper, plastic, film and board substrates.

Supplied as a 1 part ink system ready formulated and easy to use allowing flexibility in application and optimisation in appearance of printed article.

#### **Application**

Screen onto textiles, paper, plastic, film and labels. As the ink dries it becomes opaque and white. It may be recoated to increase opacity. When wet the opacity is lost and the film becomes transparent. Transparency is reduced if too heavy a coat or too many layers are applied.

#### **Product Properties**

##### **Adhesion**

The adhesion of Water Based Wet & Reveal Screen Ink depends upon the surface properties of the selected substrate. Due to the wide variety of substrates it is recommended that this ink is evaluated fully prior to any commercial use. The polyurethane binder in this ink has very good adhesion to many substrates. For full adhesion and development of resistance to damage by water the film should be baked at approximately 130°C – 150°C for 3 to 5 minutes.

If temperature curing is not possible crosslinking of the binders in the ink may be achieved by adding Wet & Reveal Crosslinking agent. This is an aziridene cross-linker and should be used only after having read and understood the safety data sheet as it is a hazardous component. This is added at a rate of 2% to the wet ink before printing. The aziridene has a limited life once in the ink and will hydrolyze by the next working day. Further additions would be required to restore the effectiveness. Crosslinking with stoving gives quickest and best cure but the dried ink will also cure at room temperature after 48 hours with the crosslinker.

## Rub Resistance

The ink itself after baking exhibits excellent rub resistance properties on absorbent and non-absorbent substrates. It is ideally suited to textiles and will adhere well to paper and print receptive plastics.

## Additional Product Properties

<b>Solid Content (%)</b> <sup>1</sup>	<b>42 ± 2.0</b>
<b>Solvent</b>	<b>Water</b>
<b>pH</b>	<b>8.0 ± 2.0</b>

## Recommended Printing Parameters

The optimum screen configuration depends on several factors, the most important of which is the desired opacity when dry balanced against the transparency when wet.

The theoretical ink volume of the screen is crucial for the desired effect. Using a higher theoretical ink volume will increase the opacity.

	<b>European / US</b>
	<b>Measurement</b>
<b>Recommended Mesh Size</b>	<b>77T / 196</b>
<b>Minimum Mesh Size</b>	<b>90T / 229</b>

Do not allow the ink to sit dormant on the screen as this will cause 'drying in' on the screen and affect print definition and quality.

## Ink Consumption

Typical ink consumption for Wet and Reveal Water Based Type P Screen Ink on a 70T /196 mesh is approx 30 – 35gms per sqm. In some applications where high opacity is required 2 or 3 passes may be required.

## Drying

The ink will air dry or can be forced dried with IR lamps or hot air. To crosslink the ink film before use it requires baking at 130°C for about 3 minutes. It is recommended that the ink and substrate are fully tested in the baking procedure before a print run.

## Cleaning recommendations

Do not allow inks to dry in on the mesh. Clean thoroughly with water.

## Handling

Water Based Wet & Reveal Type P Ink is a one part ink system that will remain stable if kept in the supplied container and stored in the correct storage conditions.

