

Water Based Wet & Reveal Ink

Technical Product Information

Metachromatic Function: Reversible

Product Name: Water Based Wet & Reveal Screen Ink

Last Revision: 11/06/2013

Description

A water based ink for textile, 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. For full adhesion and development of resistance to damage by water the film should be baked at approximately 130°C to 150°C for 3-5 minutes. On some substrates if adhesion is not achieved it is possible to try the Water Based Wet and Reveal Tycote. This dries to a clear film and helps the adhesion of the Wet and Reveal Ink. Curing is only necessary after the final coat of Wet and Reveal Ink has been applied.

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. Adhesion to difficult plastics may be improved by first printing our compatible water based wet and reveal tycote ink.

Technical Data Sheet

Additional Product Properties

Pigment Content (%)	28 ± 2
Solid Content (%) ¹	44 ± 2.0
Solvent	Water
pH	8.0 ± 2.0

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.

A water resistant stencil emulsion, such as Folex DC106 water resistant diazo emulsion should be used. Other suitable brands will be available.

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

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

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 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 3-5 minutes. It is recommended that the ink and substrate are fully tested in the baking procedure before a print run.

For curing without baking it is possible to cure by the addition of aziridene cross-linking agent at a rate of 2% by weight. Aziridene is hazardous and safety precautions supplied by the manufacturer should be followed. Allow 24 hours for curing.

The aziridene is added just before the print run and excess ink at the end of the day should be discarded as once mixed it has limited shelf life. Neo Resin Crosslinker CX-100 supplied by DSM has been used but other suppliers of aziridene are available.

Information in this Product Data Sheet is compiled from our general experience and data obtained from various technical publications. Whilst we believe that the information provided herein is accurate at the date hereof, no responsibility for its completeness or accuracy can be assumed. Tests are carried out under controlled laboratory conditions. Information is given in good faith, but without commitment as conditions vary in every case. The information is provided solely for consideration, investigation and verification by the user. We do not except any liability for any loss, damage or injury resulting from its use (except as required by law). Please refer to the Material Safety Data Sheet before using products to ensure safe handling.

