

Heat Transfer System

Subliscreeen Aqua HQI

It is a water based subliming ink system comprising a range of dye concentrates & an extender base. When blended together they provide ready to print inks for the production of transfers for polyester & other synthetic fabric

FEATURES

- Water based
- Very low odour
- Brilliant wash fast colours
- No handle to transferred print
- Optimum tack / transfer release characteristics
- Minimum dye bleed
- Excellent dye release

Fabrics

Polyester, some grades of nylon and acrylic plus many other synthetic substrates.

TEST INKS ON SUBSTRATES
BEFORE PRODUCTION RUN.

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Application

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Colour Range

The Subliscreen Aqua HQI is available in 11 standard colours.

Colour Availability

Colour matches, shades, can be supplied as per requirement.

Colour Range - Dye Concentrates

HQI001	Ultra Black
HQI057	Primrose
HQI103	Orange
HQI153	Carmin
HQI154	Fuchsia
HQI132	Violet
HQI218	Azure
HQI206	Deep Blue
HQI236	Reflex Blue
HQI053	Fluorescent Yellow
HQI139	Fluorescent Pink

Available in 1 kg containers.

Extender Base

HQI381	Extender Base
HQI382	Extender base 2000

Available in 5 kg and 30 kg containers.

Thinner

ZC656	Detail Thinner
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Available in 5ltr and 25 ltr containers.

Recommended Emulsion :

Dirasol 916.

For long runs post harden with Dirasol Super Hardener.

Thinning & Wash-up

Ready to print at standard mixing ratio.

Thin if necessary with up to 10% SS656.

Mesh

Nos.120T-150TP.

Coarser meshes can be used but increased drying time and paper cockling can be expected.

Stencil Type

Water / solvent resistant.

Fill and spot using sensitised emulsion.

When fully dried, re-expose to achieve resistance

Washup

Wash up with water or A1A03 Serisolve Aqua for more effective results.

To remove dried ink:
Seriwash Universal
Screen Wash or Actisol
Superjet Screen Spray.

Coverage & Mesh No.

(Approximately)

50-55m²/ltr. No.120T

60-65m²/ltr. No.140TP

80-90m²/ltr.No.150TP

Dependent on paper, equipment and techniques used.

Drying

Jet dry 15-20 seconds at 40-50°C.

Prints should not be allowed to exceed 60°C, as sublimation will occur.

Alternatively: Air dry 3-5 minutes.

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Transfer Paper

Transfer paper should be high quality, matt coated, cartridge paper with a low porosity/absorbency and a weight of 90-150 gsm. Best results are obtained with 135 gsm or above, as cockling may occur with lighter papers.

Cockling will reduce dramatically as the print dries. Subsequent colours should be printed when the preceding colours are fully dry, especially if registration is tight. Colours with the largest areas of coverage should be printed last, to minimise distortion.

The paper is very important, too high a porosity may allow excessive dye penetration, leading to colour change or ghosting of transferred prints.

Transferring

Subliscreeen Aqua HQI is primarily for use on polyester fabrics. Subliming transfers can be used on a wide variety of other materials such as nylons and acrylics, although performance may be diminished.

Recommended Transfer Schedule:

Polyester Fabrics -	200-210°C for 30 -40 seconds
Transfer pressure -	Moderate to high line pressure (3.5 - 6 bar).

Subliscreeen Aqua HQI inks will transfer at lower temperatures or shorter dwell times. However, a change to any element of a transfer schedule can affect the colour strength.

The chart overleaf shows some of the most common problems encountered when using subliming inks and indicates the most likely cause and solution.

Fastness

Prints made from Subliscreeen Aqua HQI have good wash fastness to ISO tests Nos. 1 (40°C), 2 (50°C), 3 (60°C). Prints are also dry clean resistant.

Prints should not be ironed.

Details on light fastness and weathering can be supplied on request.

Colour Range/Mixing Ratios

A ratio of 90 parts extender base to 10 parts dye concentrate gives good colour strength and economy of use. The mixing ratio is variable between 99:1 and 75:25 to vary colour strength. Colours with higher levels of dye concentration may have reduced rub/scuff resistance.

Tack Varnish

Subliscreeen Aqua HQI transfers have excellent tack and dye release properties. HQI381 can be used as an overprint varnish to increase tack. Overprinting with HQI381 will improve rub/scuff resistance of colours produced with high levels of dye concentrate. For this application, HQI381 should be thinned 10% with ZC656 Detail Thinner and printed through 150TP mesh.

Storage

When stored in a cool environment:

- HQI Dye Concentrates are expected to have a shelf life of 24 months from the date of manufacture.
- HQI381 Extender Base is expected to have a shelf life of 12 months from the date of manufacture.
- Keep inks in cool place, away from direct sunlight.
- Keep lids tightly closed when not in use.
- Any unused ink should not be returned to can, must be stored separately.
- Stir well before every use.

Safety and Handling

Subliscreeen Aqua HQI Dye Concentrates and Extender Base:

- are formulated to be free of any toxic, carcinogenic, mutagenic or reprotoxic chemicals.
- do not have a flashpoint and are therefore exempt from the Highly Flammable Liquid Regulations.
- are formulated free from lead and other heavy metals and therefore should comply to the EN71-3:1988 Toy Safety Standard.
- should be stored away from heat.

Comprehensive information on the safety and handling of Subliscreeen Aqua HQI ink system is given in the appropriate Sericol Safety Data Sheet, available upon request.

Environmental Information

Subliscreeen Aqua HQI Dye Concentrates and Extender Base:

- do not contain ozone depleting chemicals as described in the Montreal Convention
- are formulated free from aromatic hydrocarbons which are known to have an adverse effect on the environment.
- are water-based and therefore considerably reduce any adverse effect of solvents on the environment.
- Subliscreeen Aqua HQI381 Extender Base: is biodegradable.

Important: Stir well, the base, dye concentrate and blended inks before use. Compatibility with all substrates must be checked before commencing a production run. Transfer application should also be tested, as not all transfer presses are suitable.

Problems and Solutions

Problem	Cause	Solutions
Poor colour strength.	a. Too short a dwell time on transfer. b. Too low transfer temperature. c. Unsuitable fabric. d. Low/uneven pressure on transfer. e. Paper removed before full colour transfer.	a. Increase time to around 30 seconds. b. Increase to around 210°C. c. Must be a synthetic fabric. d. Increase transfer pressure. e. Allow paper to cool fully before removal.
Poor tack to fabric.	a. Fabric shrinkage.	a. Pre-shrink fabric under press before applying transfer. Change to a more suitable fabric if possible. b. Reduce dye concentrate level. Print a tack layer of HQI381 down last.
Poor scuff on paper. Paper cockle.	a. Dye concentrate level too high. a. Too low grammage paper. b. Too coarse mesh c. Ink not fully dried.	a. Reduce dye concentrate level. a. Use 135 gsm or heavier. b. Use 140-150T to reduce film weight. c. Increase drying time to remove all water. d. Pre-shrink paper.
Colour to colour bleed on paper.	a. Dryer set too hot.	a. Reduce to 50°C or lower.
Screen stability.	a. Very hot shop conditions. b. Ink not clearing the mesh properly.	a. Add up to 10% ZE656 Detail thinner. Use a thick flood coat. Keep plenty of fresh ink in the screen. b. Use sharp, medium shore squeegee. Reduce the off-contact/snap distance.
Poor wash fastness.	a. Dye concentrate level too high.	a. Reduce concentrate addition, results can vary significantly from fabric to fabric.

Important Note:

The information and recommendations contained in this product information sheet as well as technical advice otherwise given by representative of our company, whether verbally or in writing, are based on our present knowledge and experience. Such information/ technical advice is given in good faith, but without warranty, in view of the many factors that may affect processes or applications as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary.

For the same reason our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that the products will meet fully the particular requirements of the labels/ brands/ agencies of their clients and also that no proprietary rights and existing laws and legislation are violated.

Our advice does not relieve processors from the responsibility of carrying out their own tests and experiments, nor does it imply any legally binding assurance in respect of properties or suitability for a specific purpose or of the legal status of the listed products.

Our policy of continuous product improvement might make some of the information contained in this product information sheet out of date and users are requested to ensure that they follow current recommendations.

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