



### ***DS3-Series All-Round HC Dye Sublimation inks***

Mutoh DS3 Series inks are all-round dye sublimation inks with increased colour density. DS3 inks are compatible with both coated and uncoated sublimation papers and will also allow direct print onto polyester fabrics. The inks give excellent image definition and sharpness and are specifically designed to ensure optimum print reliability with Mutoh's latest generation AccuFine piezo drop on demand print heads. The wide colour gamut achieves very vivid, bright colours and ensures good fastness results. The increased amount of colorant (HC) in the ink reduces the ink consumption, facilitates drying and ensures compatibility with lightweight papers.

### ***Ink Part Numbers***

#### **DS3-BK1000PE**

- Allround HC Sublimation Ink – 1kg pack– Black

#### **DS3-CY1000PE**

- Allround HC Sublimation Ink – 1kg pack– Cyan

#### **DS3-MA1000PE**

- Allround HC Sublimation Ink – 1kg pack– Magenta

#### **DS3-YE1000PE**

- Allround HC Sublimation Ink – 1kg pack– Yellow

### ***Printer Compatibility***

Mutoh DS3 inks are tailored to the XpertJet series printers: XPJ-1642WR and XPJ-1682WR.

The DS3 inks are also compatible with VJ-1604WX, VJ-1624WX, VJ-1638WX, VJ-1924W, VJ-1938WX, VJ-1948WX, VJ-2638X dye sub version and DrafStation RJ-900X-U1 models.



### **Applications & Substrates**

The DS3 all-round HC inks are suited for sublimation onto polyester or mixed fibre(\*) fabrics for the production of garments, furnishings, graphic arts, interior textiles, flags and household items. They can also be used for transfer onto polyester coated objects, e.g. mugs, plates, magnets, wood, place mats, ChromaLuxe® plates, tiles, mirrors, acrylic glass, metal, nylon, lighters, pens and CDs. The DS3 inks will also print directly onto closed coated polyester fabrics or mixed fibres. (\*)

(\*) As a guideline, a minimum PES content of 65% is recommended. The higher the PES content, the better the finished result. To be judged in combination with your target fabric and application.

### **Packing**

DS3 inks are shipped in convenient, degassed 1000 gram pouches ensuring easy handling, clean operation and stable, reliable jetting. To mount the ink pouches into Mutoh printers, XpertJet ink cases (INKCASE-1000) or ValueJet ink adapters (VJ-HCIPADPT) are required.

### **Application – Guidelines**

- A calendar or heat press can be used for sublimation.
- Before passing the paper through the calendar or heat press for transfer, ensure the sublimation paper is dry.
- The typical transfer temperature is between 195°-220°C with a corresponding exposure time of 30 seconds or longer. Sublimation times and temperatures may vary depending on the paper

type and the type and nature of the fabric or coated material you are transferring to.

If direct printing to closed PES fabric, Mutoh recommends a final wash to achieve a softer finish and to increase general fastness. Washing will allow removal of the thickeners contained in the fabric pre-treatment and will remove any excessive colorant which was not completely fixed.

### **First Ink Installation**

Mutoh water-based printers are pre-flushed with water-based storage liquid in the factory so pre-flushing before loading the initial inkset is not required.

### **Cleaning for Regular Maintenance**

There is a dedicated cleaning liquid available to perform maintenance on a printer loaded with DS3 inks. The part number is: DS3-CL1000E.

### **Shelf Life – Shipping – Storing - Using**

The shelf life of the ink is 12 months.

Ship and store the ink under following conditions:

- Recommended shipping temperature: +5° - +35°C
- Keep the ink in a cool, dry area, above the floor and away from direct sunlight.

Please use the ink in the following environmental conditions in combination with Mutoh XPJ-Series printers:

- Recommended temperature: 20°-28°C
- Recommended humidity: 40-60% RH (non-condensing)





### Certifications Per Colour

Ink Colour	Sublimation Class (1)	Light Fastness (2)	Colour Fastness to Water (3)	Colour Fastness to Perspiration (4)
Cyan	A	3-4	4-5	4-5
Magenta	A	4	4-5	4-5
Yellow	A	4	4-5	4-5
Black	A	4	4-5	4-5

- (1) Sublimation Class A exhibits excellent dyeing properties and good fastness properties.  
 (2) Light Fastness. According to ISO 105-B02. Score from 1-8 on Blue Wool scale. 1 is worst (very low) and 8 is best (exceptional).  
 (3) Colour fastness to water according to ISO 105-E01. 1-5 scale. 1 is worst and 5 is best.  
 (4) Colour fastness to perspiration according to ISO 105-E04. 1-5 scale. 1 is worst and 5 is best.

Ink Colour	Colour Fastness to Rubbing (5)	Colour Fastness to Sea Water (6)	Colour Fastness to washing (7)
Cyan	4-5	3-4	4-5
Magenta	4-5	4	4-5
Yellow	4-5	4	4-5
Black	4-5	4	4-5

- (5) Rubbing fastness. Properties according to ISO 105-X12. 1-5 scale. 1 is worst and 5 is best.  
 (6) Fastness to sea water. Properties according to ISO 105-E02. 1-5 scale. 1 is worst and 5 is best.  
 (7) Fastness to washing. Properties according to ISO 105-C02. 1-5 scale. 1 is worst and 5 is best.

Ink Colour	Allergenic Disperse Dyestuff (8)	Azo Dyes (9)	Phthalates (10)	Heavy Metals (11)
Cyan	Not Detected	Not Detected	Not Detected	Within Specification
Magenta	Not Detected	Not Detected	Not Detected	Within Specification
Yellow	Not Detected	Not Detected	Not Detected	Within Specification
Black	Not Detected	Not Detected	Not Detected	Within Specification

- (8) Presence of Allergenic Disperse Dyestuff according to DIN 54231:2005 - Detection limit 15ppm  
 (9) Presence of Azo Dyes BS according to EN 14362 - Detection limit 5ppm  
 (10) Presence of Phthalates CPSC-CH-C1001-09-3 - Detection limit 0.005%  
 (11) Presence of heavy metals according to EN ISO 105 E04

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