

Diamond F Label Inks

Mirage Inks Ltd

02/06/2016

Revision 2, Volume 1

Technical Data Sheet

Diamond F Free Radical UV Flexo Ink Range

Mirage Inks Diamond F Label range of Flexographic Free Radical UV Curing inks has been developed specifically for the Narrow Web label market.

This range of inks has been formulated to be free of Benzophenone, ITX and 4MEBP.

Products within this range are manufactured in accordance with Good Manufacturing Procedures for this end use.

Press Speeds in excess of 200 m/min are currently achieved with the Diamond F Label Ink Range

Greater Flexibility/Specialist Products

Diamond F Label Inks to Suit Individual Customer Requirements

Mirage Inks manufactures all of its flexographic ink ranges from scratch. Beginning with dry pigments and manufacturing our own bespoke colour concentrates from which we have the flexibility to adapt to individual customers' requirements.

Within the Diamond F Label ink range a number of specialist product lines are available. We have a strong single pigment base range developed specifically to enable 95% or more of pantone spot colours to be matched for a 5cc or lower anilox volume. This enables improved print quality and ink economy. Recent developments include a CMYKOGV Extended Gamut set to give the required densities from process anilox volumes (3.5-4.5cc).

Please speak to our technical department for more information on these and other bespoke developments to suit your technical needs.

***Optimum
Rheology
and Colour
Strength
hand in hand
with
economy***

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Continual development of Mirage Inks' complete range of flexographic printing inks focusses on providing our customers with products to meet their technical expectations. The Diamond F Label Ink Range exhibits excellent rheology to provide high print quality alongside optimum colour strength to enable a wide range of pantone spot Colours to be matched with a 7cc anilox or less. Careful selection of oligomers, monomers and photo-initiators make the Diamond F Label ink range an economical ink system for the narrow web market whilst providing high press speed, excellent rheology and high colour strength.



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Applications for this ink range include :

self adhesive labels /tickets/sleeves/foil laminates

Substrates

This ink range is suitable for a wide range of commercially available paper/PE/PP/PVC/PET substrates.

Filmic substrates should be treated to a minimum 42 Dynes/cm.

Testing for suitability is advised.

Please consult Mirage's Technical Department for further information

Printing Recommendations

Anilox Range

Process Inks	3cc-4cc	Dependent on target density, substrate and Press speed (Ink transfer)
Pantone Spot Colours	5cc-8cc	Dependent on colour strength of the spot colour.
White	6cc-10cc	Dependent on target Opacity. Higher film-weights are possible - Consult Mirage Inks Technical Department.
Lacquers	6cc-8cc	Dependent on lacquer type and required technical performance.

Press Speed

Maximum press speed will vary from press to press and is very much dependent on press configuration, substrate and lamp output. Limiting factors related to the Diamond F ink range will be colour strength (spot colour) and ink film-weight (spot colour or opaque white). Press speeds of 200 m/min are achievable with this ink range under normal printing conditions.



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Standard Diamond F Label Ink Range

Ink Description	Ink Reference	Light-Fastness (BWS Full Strength)*
Process Yellow	MQF41675	4
Process Magenta	MQF40113/1	6
Process Cyan	MQF39919/1	8
Process Black	MQF44507	6
Yellow c	MQF40096/5	4
Orange 021c	MQF40097/3	3
Warm Red c	MQF40098/2	3
Red 032c	MQF40099/2	3
Rubine Red c	MQF40100/1	6
Rhodamine c	MQF40101/1	8
Purple c	MQF40102/1	7
Violet c	MQF40103/1	7
Reflex Blue c	MQF40104/1	7
Blue 072 c	MQF40105/1	7
Process Blue c	MQF40106/1	8
Green c	MQF40107/1	8
Black c	MQF44903	8
Opaque White	MQF46926	8
Transparent White (medium)	MQF37888/5	n/a

*based on pigment suppliers data

Speciality Products

In addition to the basic ink range above, Mirage also offer the following inks in the Diamond F Label ink system: Strong Single Pigment Base Inks, Strong Process Inks, Improved Lightfast colours, Fluorescent inks, OGV Extended Gamut Inks and a wide range of over-print varnishes and additives.



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Colour Matching

Mirage have X-Rite Formulation 6 Software with assortments to cover all of our UV Flexo ink ranges. This enables the customer to get a quick turnaround on bespoke colour matching's for their target anilox volumes. The Diamond F Label Ink Assortment is available to customers with the daughter software. There is an extensive list of blends for pantone spot colours that have been physically matched for this ink range by our trained technicians in our laboratory.

Shelf Life

In-line with Mirage Inks Ltd ISO 9001 procedures, retained batch samples for any product supplied under this ink name / prefix, are retained & stored at room temperature for a period of six months from the date of manufacture. Therefore Products supplied in this ink range are best used within a 6 month period from date of manufacture.

Product should be stored in a closed container impenetrable to stray UV Light and at temperatures ranging from 10°C-25°C.

Food Contact and Migration

Mirage Inks do not recommend this ink system for use where migration is an issue. Although this ink range was developed to be BP/ITX/4MEBP free it is only suitable for indirect food contact applications where there is a functional barrier present.

If migration is a potential issue Mirage do offer alternative ink ranges such as our Diamond N and Diamond LM Ink ranges. Please contact our Technical Department to discuss your needs with our trained Chemists.

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All information contained in this data sheet is based on extensive laboratory testing at Mirage Inks.

Technical performance of the inks can vary according to the conditions the product is printed under, which Mirage Inks have no control over. Therefore we recommend the product be trialed fully to assess suitability for each customer's application. The product should be assessed to account for all the variables within the process, such as different substrates etc.

The information given is supplied as a guide only with the properties achieved under laboratory conditions.

Should product be used outside of the recommended 6 month shelf life Mirage Inks will have no reference sample for comparative testing purposes, so cannot investigate or be held responsible for print related problems.

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