

Diamond F Shrink Inks

Mirage Inks Ltd

10/03/2016

Revision 1, Volume 1

Technical Data Sheet

Diamond F Free Radical UV Flexo Ink Range

Mirage Inks Diamond F Shrink range of Flexographic Free Radical UV Curing inks has been developed specifically for the Shrink Sleeve market.

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

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

Press Speeds in excess of 200 m/min can be achieved with the Diamond F Shrink Ink Range

Greater Flexibility, Adhesion and Shrink Performance

Diamond F Shrink 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.

The Diamond F Shrink ink range offers end users high density, low odour, fast curing Process inks and single pigment base range. Where product resistance is required, Mirage offer resistant base colours as required.

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 Optimum Shrink Performance and economy



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 Shrink 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 result in an ink system which performs well for high shrink applications on PET/PVC and OPS whilst providing high press speed, excellent rheology and high colour strength.

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Applications for this ink range include :

Shrink Sleeves

Substrates

This ink range is suitable for a wide range of commercially available PP/PVC/PET and OPS 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 Shrink 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 Shrink Ink Range

Ink Description	Ink Reference	Light-Fastness (BWS Full Strength)*
Process Yellow	MQF42806	4
Process Magenta	MQF42807	6
Process Cyan	MQF42808/1	8
Process Black	MQF42809	6
Yellow	MQF42806	4
Orange	MQF43369	6
Warm Red	MQF43215	7
Rubine	MQF42807	6
Rhodamine	MQF43126/2	8
Violet	MQF43082	7
Process Blue	MQF42808/1	8
Green	MQF43084	8
Black	MQF43668	8
Opaque Backing White	MQF47185	8
Transparent White (medium)	MQF41370/3	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 Shrink ink system: Pearlescent inks, product resistant magenta, text white, surface white and a 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 Shrink 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

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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 and HDDA 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.

[Tel : 01761 436498](tel:01761436498)



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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.

Mirage Inks Ltd, www.mirageinks.com 01761 436498

Email : sales@mirageinks.com uv@mirageinks.com technical@mirageinks.com

