



QUARTZ STELLAR CATIONIC U.V. INK SYSTEM

(Prefix QS & DP)

DESCRIPTION

A low odour, high gloss ultraviolet curing Ink System for Flexo applications that is instantly converted to a solid using an acid catalysed process. The 'Stellar' range was certified by ISEGA in 2008 to be Food Packaging Compliant in terms of migration results.

TYPICAL PROPERTIES (FULLY CURED INK)

A high gloss and resistant surface.
100% compliance with Environmental Protection Act-VOC Free.
Excellent solvent resistance.
Good wet & dry rub resistance*
Low odour & taint properties.
Continues to dark cure after initial reaction.
Boiling & Pasteurisation resistant

*Printed material can show some ink removal when tested after long periods of water immersion & print storage time. Therefore, before making any commercial print, it is important that these aspects are considered & thoroughly tested to ensure that the printed product meets the required technical specification (including aged print) - Mirage Inks technical department can conduct a test program if required.

SUBSTRATES

The ink system is suitable for printing a wide range of polyamide casings. However, due to the nature of the substrate, some additives and binders can inhibit or poison the curing reaction. Therefore it is recommended that print tests are made on the substrate prior to commercial printing. Mirage Inks Technical Department should be consulted before printing any unproven substrate.

REDUCERS

Normally no reducers are required and no addition should be made to the ink. It is supplied press ready as a complete system. Additions of solvent and other materials may adversely affect cure rate and should be avoided. A medium is available if a reduction in colour strength is required.

QUALITY ASSURANCE

The Quartz Stellar range is Quality Controlled using Mirage Inks Test Specification as detailed on the following page. (Details of all tests are available on request from our technical department). Should there be tests required for applications that are not covered by the specification, please contact the technical department.

Environmental Considerations – Please note that the cure/drying speed of this system will be adversely affected by high levels of humidity. Under high humidity, the press speed may need to be reduced, or if possible, lamp power increased to negate this affect. Contact Mirage development laboratory for more information on this aspect.

Any inhibition of the UV cationic reaction, resulting in incomplete cure, (e.g. through environmental /substrate/processing conditions), can adversely affect adhesion & resistance properties.

Additional Information – see Mirage document 'IMPORTANT ASPECTS TO CONSIDER WHEN PRINTING WITH CATIONIC UV INKS' for further detail on using cationic inks.

Print for food applications where migration is an issue - Although the Quartz Stellar series has been developed using raw materials that give low migration potential; it's the converters responsibility to ensure, through migration tests, that any printed material used for food packaging be assessed by an accredited laboratory & meets the necessary legislation.
The printer/converter must also consider any different substrates/end applications & the affect this may have on migration potential.

The information given above is supplied as a guide only with the properties achieved under laboratory conditions. Because the print conditions, application & substrate are beyond our control., the information provided does not give a guarantee or warranty of performance. Mirage Inks Limited always recommend that any printer/converter satisfy themself as to the suitability of the product with appropriate trials. Please consult our laboratory to discuss any different requirement. As particular conditions of use and variations in quality of materials and substrates being used are outside our control, it is therefore not possible to guarantee the performance of our products.

Products supplied under this ink name / prefix, are best used within a six-month period from the date of manufacture (as specified on the product label).

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.

Should the product be used outside of this six-month period, Mirage Inks Ltd. have no reference sample for comparative & test purposes, so cannot investigate or be held responsible for any print related problems. Mirage Inks Ltd will not accept liability for any claim arising as a consequence of a laboratory colour matching being offered to our customer in good faith, and then subsequently Mirage's customer failing to obtain approval from their customer prior to printing / production.



QUARTZ STELLAR INK TEST SPECIFICATION

SUBSTRATE:- POLYAMIDE CASING

| <u>TESTS</u> | <u>MIRAGE TEST No.</u> |
|----------------------------------|-------------------------------|
| COLOUR | 6 |
| GLOSS | 7 |
| TAPE ADHESION | 8 |
| SCRATCH | 9 |
| WRINKLE | 10 |
| FINGER TACK (Cure) | 30 |
| THUMB TWIST (Cure) | 52 |
| SOLVENT RESISTANCE (Cure) | 53 |
| RETICULATION (Substrate wetting) | 67 |
| FOAMING | 68 |
| IR ANALYSIS | 160 |
| COLD WATER SHIRring TEST | 207 |