

ML UV Matt Inks

1. Description

ML is a range of UV Matt screen inks intended for printing labels, tags, tickets and other applications in the narrow web market where a flexible, matt finish with good receptivity is required.

2. Product Features*

- Velvety matt finish
- High density black and high opacity white
- Optimised viscosity and flow for flatbed and slow speed rotary screen printing.
- Good adhesion to a wide range of label substrates
- Receptive to hot foil stamping
- Very low edge-curl
- Free from NVP and NVC

3. Product Suitability*

3.1 Applications

ML UV Matt Inks are intended for use in the following areas:

- Flatbed and slow speed Rotary Screen printing of labels for wine labels, toiletries, detergents, alcohols etc.
- Combination printing with other Sun Chemical UV Flexo and UV Offset products.

ML UV Matt Inks are **not** suitable for use in the following areas:

- Primary food packaging unless there is an effective functional barrier.
 - Plastic packaging and bottles will not usually provide an effective barrier to migration.
 - Printers should assure themselves that use of these products on food packaging has been fully assessed for risk and the finished printed product meets all relevant regulatory requirements.
 - Typically, the use of specifically formulated Low Migration (LM) products will be required.

ML Matt Inks should not be used for other end uses without prior discussion with your local Sun Chemical representative

*Please refer to your local Sun Chemical representative for specific details.



3.2 Substrates

ML UV Matt Inks are ideally suited to most commonly used label stocks, including paper, top-coated polyethylene and polypropylene, PVC, corona discharge treated polyethylene, polypropylene and PET.

It is strongly recommended that the handling and storage guidelines provided by the label material manufacturer are followed. In addition, thorough adhesion tests on both finished labels and labelled products should be conducted, especially if a new substrate is being used (see FINAT Suppliers and Users Technical Manual for Pressure Sensitive Laminates).

Not all grades of self-adhesive materials are suitable for decoration with UV curing inks. Some plastics suffer from embrittlement, resulting in difficulties with application and removal of labels.

ML UV Matt Inks have been developed using a wide range of label substrates from suppliers and exhibit excellent lay flat properties. However, edge curl may be a problem when some UV curing inks are applied as a bleed-off on self-adhesive materials but this is dependent on the grade of self-adhesive materials and the quality of the adhesive used..

The problem is exaggerated when heavy ink deposits are applied which require excessive cure energy but which may be avoided by leaving an unprinted border. As a number of factors can influence the adhesion of the label e.g. application conditions and even curvature of the labelled surface, it is recommended that preliminary testing is conducted to ensure the performance of the final product is acceptable. For further information, contact your local Sun Chemical Screen branch*.

* Please refer to your local SunChemical representative for specific details.

3.3 Post Print Processes

ML UV Matt Inks will accept foil blocking, and a number of commercially-available foils have been successfully tested on a number of substrates but care should be taken as this process can be influenced by a number of factors including cure, age of print, etc. Testing of foil blocking is recommended before commencing a production run.

* Please refer to your local SunChemical representative for specific details.

3.4 Lightfastness

The pigments used in **ML UV Matt Inks** have a rating of at least 7 on the Blue Wool scale; well beyond normal labelling requirements. Please note that some tints or blends, especially those containing a high proportion of white or base, may have reduced colour fastness properties.



4. Safety, Health and Environment

ML UV Matt Inks should be used in accordance with normal standards of industrial hygiene. Please refer to the information provided on product labels and relevant Safety Data Sheets. For more details on handling of UV materials please refer to EuPIA's latest document – 'Guidelines for Printers on the Safe Use of Energy Curing Printing Inks and Related Products'.

4.1 Storage

ML UV Matt Inks are supplied in 1 and 5 Kg tamper-evident black plastic buckets. Shelf life is at least 12 months from date of manufacture in their original containers when stored between 5° and 32°C and protected from direct sunlight but may remain useable for longer periods.

4.2 Waste Disposal

Care should be exercised in the disposal of printing ink waste. This should be carried out in accordance with good industrial practice, observing all the appropriate local regulations and guidelines. For more specific handling advice refer to the Safety Data Sheet (SDS).

5. Printing Conditions

ML UV Matt Inks should be mixed thoroughly before use.

5.1 Printing Materials

High quality stencil materials such as those in the SunCoat range are recommended for best results. Product Data Sheets and detailed specialist advice on choice of emulsions, films and all related stencil products can be obtained from your local Sun Chemical branch. Fine polyester mesh with a mesh count of 150 – 180 threads/cm and a medium/hard sharp polyurethane squeegee should be used.

5.2 Additives

ML Matt Inks are supplied at press-ready viscosity and do not normally require modification. However, should thinning be necessary, small additions (up to 5%) of viscosity modifier UV MATT RL THINNER can be made.

The use of the cure accelerator shouldn't be required under normal printing and curing conditions but if extra cure is required, the use of up to 3% of V8910:NO YELLOWING PI Solution is recommended.

5.3 Wash Up

A variety of proprietary wash-up solutions are available which are suitable for use with UV inks and press components such as screens, squeegees and pipes. Please contact Sun Chemical technical services or your Sun Chemical representative for recommendations and advice.



ML UV MATT Colours

6. End-Use Safety / Assumptions

Acceptable technical performance of **ML UV Matt Inks** is dependent on:

- Control of screen mesh / film weight.
- Adequate curing on press to ensure that the print is dry before conversion.
- Full checks having been made to ensure the printed material meets customer specifications.

	Code	Description	Buckets (kg)
Colour range	ML W50	MATT WHITE	1 and 5
	ML E50	MATT BASE VARNISH	1 and 5
	ML Y30	PRIMOSE YELLOW	1
	ML Y50	GOLDEN YELLOW	1
	ML O50	ORANGE	1
	ML R20	SCARLET	1
	ML R50	MID RED	1
	ML M50	MAGENTA	1
	ML V50	VIOLET	1
	ML B50	BLUE	1
	ML G50	GREEN	1
	ML N50	BLACK	1
	ML N51	OPAQUE BLACK	1 and 5
Other products	RL THINNER	UV MATT RL THINNER	5L
	V8910	NO YELLOWING PI	1L

Please see www.sunchemical.com for further information on Sun Chemical products and services and contact your local Sun Chemical representative for specific product advice.