

SolarFlex[®] LM

Part of the SOLARIS[®] System

1. Description

SolarFlex[®] LM is a range of high performance UV flexo inks offering the narrow web printer the option to print primary or secondary food packaging or pharmaceutical packaging where a risk from migration has been identified.

2. Product Features*

- Lowest migration potential. Certified by independent laboratories.
- Based on patented M-Cure[®] photoinitiators.
- Formulated without photoinitiators with a propensity to migrate such as ITX, Benzophenone etc.
- Fast cure speed to ensure full cure at the highest press speeds.
- Low dot gain and excellent trapping for high print quality
- Silicone-free for easy lamination or post-print finishing
- Formulated without VOC's.

3. Product Suitability*

3.1 Applications

SolarFlex[®] LM inks are intended for use in the following areas:

- Primary or secondary food packaging, pharmaceutical packaging or other sensitive applications.
- Suitable grades of paper or top-coated plastic self-adhesive labels.
- Other paper or board applications requiring low migration potential such as sandwich boxes.
- Can be over-varnished to improve gloss, physical and chemical resistance properties.
- Can be hot foil stamped with the appropriate 'stampable' overprint varnish.

SolarFlex[®] LM inks are **not** suitable for use in the following areas:

- Uncoated Thermal papers.
- Direct food contact.
 - Printers should assure themselves that any use of these products on food packaging has been fully assessed for risk and meets the required regulatory requirements for its intended use.

SolarFlex[®] LM 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.

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3.2 Substrates

SolarFlex[®] LM inks are suitable for most grades of label stocks commonly used in the Narrow Web industry. Corona treatment is recommended for non-top-coated plastic substrates to ensure an optimum treatment level of 38-44 Dynes/cm but preliminary tests should always be conducted prior to producing commercial print. With significant variation between different grades of substrates, the printer should take any specific advice from the substrate manufacturer and make any necessary tests under realistic conditions before commercial printing.

3.3 Print Finishing

SolarFlex[®] LM inks can be over-varnished to improve gloss, physical and chemical resistance properties and are suitable for hot foil stamping or cold-foil blocking when used in conjunction with the appropriate blockable overprint varnish or adhesive such as SLD008.

SolarFlex[®] LM inks will accept most types of VIP (Variable Information Printing) but great care should be taken when producing print for subsequent VIP due to the wide variety of processes and materials available. Best results can often be obtained using an appropriate overprint varnish*.

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

4. Safety, Health and Environment

SolarFlex[®] LM 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'.

SolarFlex[®] LM inks are made using Good Manufacturing Practice and in accordance with the latest EuPIA Guidelines on Printing Inks Applied to the Non-Food Contact Surface of Food Packaging Materials and Articles. (See www.eupia.org for details)

4.1 Storage

SolarFlex[®] LM inks are supplied in 5 Kg tamper-evident black plastic buckets with spouts. Shelf life is at least 12 months from date of manufacture in their original containers when stored between 5° and 25°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).

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5. Printing Conditions

5.1 Printing Viscosities

SolarFlex[®] LM inks are supplied press-ready and should not need adjusting under normal conditions whether using open-pan or chamber configurations.

5.2 Additives

A number of low migration press-side additives are available for non-standard conditions or applications.

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 flexo plates and pipes. Please contact Sun Chemical technical services or your Sun Chemical representative for recommendations and advice.

5.4 Plates and Rollers

SolarFlex[®] LM inks are suitable for use with UV compatible photopolymer plates commonly used in the industry. All rollers, tubes, sealants etc. must also be resistant to UV materials.

6. End-Use Safety / Assumptions

Acceptable technical performance of SolarFlex[®] LM inks is dependent on:

- Control of film weight.
- A clean working environment.
- Standard products are not mixed with SolarFlex[®] LM inks.
- Adequate curing on press to ensure that the print is fully cured before conversion.
- Appropriate packaging design and structure.
- Control of any migratable substances within the finished packaging structure.

Choice and control of film weight, curing and substrate are printer technical requirements for which the Sun Chemical technical team can provide assistance if required.

To fulfill its responsibility within the supply chain Sun Chemical will provide information regarding potential migratable components, where present in its inks, if required.

For further information on Low migration printing, please refer to Sun Chemical's Best Practice Guide, **PRINT FOR PACKAGING – LOW MIGRATION PRINTING**.

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.

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	Code	Description	Lightfastness	Alkali	Alcohol
4-colour process	SFLM26	PROCESS YELLOW	5	+	+
	SFLM27	PROCESS MAGENTA	5 ¹	-	+
	SFLM25	PROCESS CYAN	7	+	+
	SFLM46	PROCESS BLACK	7	+	+
Standard Colours	SFLM93	GS YELLOW	6	+	+
	SFLM20	TRANSPARENT ORANGE	4	+	-
	SFLM40	RESISTANT SCARLET	6	+	+
	SFLM22	RESISTANT MID RED	6	+	+
	SFLM56	RESISTANT RHODAMINE ²	7	+	+
	SFLM64	RESISTANT VIOLET ²	6-7	+	+
	SFLM63	RESISTANT REFLEX BLUE ²	6-7	+	+
	SFLM71	GREEN	7	+	+
Clears	SFLM50	BLACK	8	+	+
	SFLM48	TRANSPARENT WHITE	N/A	N/A	N/A
	SFLM45	FIRST-DOWN WHITE	7	+	+

¹ Lightfastness under wet conditions, such as during external exposure is significantly worse for certain colours. Please consult our technical services for recommendation of alternative shades.

² Resistant colours are may differ slightly in shade from the equivalent non resistant colour.

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