

SolarWave Integra Process Inks

Part of the SOLARIS® System

1. Description

SolarWave Integra Process Inks is a versatile range of high-performance process inks designed for printing labels, tags, sleeves, tickets and other applications found in the narrow web market. Curable under UV-LED or Medium Pressure Mercury lamps.

2. Product Features*

- Cures under UV-LED lamps in the 385-395nm range as well as standard mercury vapour lamps.
- Low viscosity and good flow, optimised for reliable and consistent press performance.
- Low odour for sensitive applications.
- Low foaming.
- Adhesion characteristics to suit a wider range of plastic substrates.
- High hold-out for highest gloss and cure even on the most absorbent papers.
- Silicone-free formulation for excellent trapping, easier lamination and post-print finishing.

3. Product Suitability*

3.1 Applications

SolarWave Integra Process Inks are intended for use in the following areas:

- Suitable grades of flexible films, paper or top-coated plastic self-adhesive labels.
- Other paper or board applications such as tags and tickets.
- Can be over-varnished to improve gloss, physical and chemical resistance properties.
- Can be hot foil stamped with the appropriate 'stampable' overprint varnish.
- Curing under UV-LED or Medium Pressure Mercury lamps.

SolarWave Integra Process Inks are **not** suitable for use in the following areas:

- Uncoated Thermal papers.
- 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.

SolarWave Integra Process 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

SolarWave Integra Process 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

SolarWave Integra Process 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 SolarDor™ adhesive.

SolarWave Integra Process Inks will accept most types of VIP (Variable Information Printing) but 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

SolarWave Integra Process 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

SolarWave Integra Process Inks are supplied in 5 Kg tamper-evident black plastic buckets with spouts, 20 Kg Metal Pails or 200 Kg Barrels. Shelf life is 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. WVF127 and WVF135 have a shelf-life of 6 months.

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 Sheets (SDS).

4.3 EUPIA Exclusion Policy

SolarWave Integra Process Inks are formulated in accordance with the EuPIA Exclusion policy for printing inks and related products. In particular, this excludes from use all materials classified according to the CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures as carcinogenic, mutagenic or toxic for reproduction in categories 1A or 1B with hazard statements H340, H350 or H360, in addition to toxic or highly toxic materials with hazard statements H300, H301*, H310, H311*, H330, H331, H370 or H372* (* may be permitted if safe use can be demonstrated following risk assessment). Pigments based on compounds of Sb, As, Cd, Cr (VI), Pb, Hg, Se, certain dyes, solvents, plasticisers and miscellaneous materials are also excluded.

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September 2023
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5. Printing Conditions

Printing Viscosities

SolarWave Integra Process Inks are supplied press-ready and should not need adjusting under normal conditions whether using open-pan or chamber configurations.

5.2 Additives

A range of press-side additives is 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

SolarWave Integra Process 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.

5.5 Aniloxes

SolarWave Integra Process Inks are optimized to cure at 'usual' optical print densities. Printing at higher densities, or using aniloxes outside the normal range can lead to cure issues. A typical range of densities is indicated below achieved with aniloxes in the range of 2.0 to 4.0 cm³/m². Intense Process inks can be printed with lower volume aniloxes than standard strength.

	ANSI T FILTER	DIN 16536
Yellow	0.90-1.10	1.20-1.40
Magenta	1.30-1.40	1.30-1.40
Cyan	1.33-1.55	1.30-1.50
Black	1.50-1.70	1.50-1.70

6. End-Use Safety / Assumptions

Acceptable technical performance of **SolarWave Integra Process Inks** is dependent on:

- The press being fitted for UV or UV-LED curing, including suitable plates and pipes.
- Control of film weight and print density Control of anilox / film weight.
- Adequate curing on press to ensure that the print is dry before conversion. LED 395nm dose levels of >150mJ/cm² recommended. UV dose levels of >100mJ/cm²* recommended.
- UV lamp system maintenance, in particular clean reflectors and windows as well as lamp lifetime and output monitoring.
- Full checks having been made to ensure the printed material meets customer specifications.

* UV dose measured with Fujifilm UVScale M film. Dose is total of UVA, UVB, UVC and UVV.

SolarWave Integra Process Inks are not intended to be used in applications where low migration is an end-use requirement. There are materials within the ink formulation which have the potential to migrate under certain conditions. If a label, sleeve or tag etc. forms part of a food package, it is the responsibility of the converter and food packer to ensure that migration does not exceed any permitted regulatory limitations.



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	Code	Description	Lightfastness	Alkali	Alcohol	Soap	Grease
4-colour process	WVFI26	PROCESS YELLOW	5	+	+	+	+
	WVFI27*	PROCESS MAGENTA	5 ¹	-	+	-	+
	WVFI25	PROCESS CYAN	7	+	+	+	+
	WVFI46	PROCESS BLACK	7	+	+	+	+
Intense 4-colour process	WVFI30	INTENSE PROC YELLOW	5	+	+	+	+
	WVFI35*	INTENSE PROC MAGENTA	5 ¹	-	+	-	+
	WVFI38	INTENSE PROCESS CYAN	7	+	+	+	+
	WVFI24	INTENSE PROC BLACK	7	+	+	+	+
Extended Gamut process	WVFI66	EG PROCESS ORANGE	5	+	+	+	+
	WVFI67	EG PROCESS GREEN	7	+	+	+	+
	WVFI68	EG PROCESS VIOLET	6-7	+	+	+	+
	WVFI69	EG PROCESS REFLEX	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. Test Methods available on request.

* Shelf life of 6 months

Please note that the process inks are optimized for the specific conditions associated with process printing so it is strongly recommended not to use process inks for colour matching purposes.

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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