# SolarFlex® Integra Blend Inks

**Part of the SOLARIS® System**

## 1. Description

**SolarFlex® Integra Blend Inks** is a versatile range of high-performance UV flexo inks designed for printing labels, tags, sleeves, tickets and other applications found in the narrow web market.

## 2. Product Features*

- 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.
- Fast curing for higher press speeds.
- Silicone-free formulation for excellent trapping, easier lamination and post-print finishing.

## 3. Product Suitability*

### 3.1 Applications

**SolarFlex® Integra Blend 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.

**SolarFlex® Integra Blend 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.

**SolarFlex® Integra Blend 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

**SolarFlex® Integra Blend 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® Integra Blend 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® Integra Blend 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

**SolarFlex® Integra Blend 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

**SolarFlex® Integra Blend Inks** are supplied in 5 Kg tamper-evident black plastic buckets with spouts. 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. SINT52, SINT55 and SINT61 have shelf lives of 6 months due to the nature of the pigment.

### 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

**SolarFlex® Integra Blend 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.

## 5. Printing Conditions

### Printing Viscosities

**SolarFlex® Integra Blend 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

**SolarFlex® Integra Blend 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

**SolarFlex® Integra Blend Inks** are optimized to cure with anilox volumes used for lines, text or spot colours, typically in the range of 5 to 8 $cm^3/m^2$.

## 6. End-Use Safety / Assumptions

Acceptable technical performance of **SolarFlex® Integra Blend Inks** is dependent on:

- The press being fitted for UV printing, 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. UV dose levels of >50mJ/cm2 are normally 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.

**SolarFlex® Integra Blend 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.

# SolarFlex® Integra Blend Inks

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The coloured blend inks below are full-strength, single-pigment finished inks which are be made from a 60:40 blend of **SolarVerse UV Flexo bases** and **SINT00 - SolarFlex® Integra Technology Varnish**. These can be ordered directly from a Sun Chemical branch or blended at a printer.

| | Code | Description | Lightfastness Full strength | Alkali | Alcohol | Soap | Grease |
|---|---|---|---|---|---|---|---|
| Technology Varnish | **SINT00**[5] | TECHNOLOGY VARNISH | N/A | N/A | N/A | N/A | N/A |
| Standard Blend Colours | **SINT01**[5] | CLEAR EXTENDER | N/A | N/A | N/A | N/A | N/A |
| | **SINT48**[5] | TRANSPARENT WHITE | N/A | N/A | N/A | N/A | N/A |
| | **SINT45**[5] | OPAQUE WHITE | 8 | + | + | + | + |
| | **SINT15** | YELLOW | 5 | + | + | + | + |
| | **SINT20** | TRANSPARENT ORANGE | 4 | + | - | + | + |
| | **SINT31** | WARM RED[4] | 3[1] | - | + | + | + |
| | **SINT32** | RED 032 | 6 | + | + | + | + |
| | **SINT42** | RUBINE RED | 5[1] | - | + | - | + |
| | **SINT55** | RHODAMINE[3] | 3 | - | - | - | - |
| | **SINT52** | VIOLET[3] | 4 | - | - | - | - |
| | **SINT61**[5] | REFLEX BLUE[3] | 3[1] | - | - | - | - |
| | **SINT16** | BLUE | 7 | + | + | + | + |
| | **SINT71** | GREEN | 7 | + | + | + | + |
| | **SINT50** | UNTONED BLACK | 8 | + | + | + | + |
| Resistant Colours [2] | **SINT54** | RESISTANT YELLOW[2] | 6 | + | + | + | + |
| | **SINT83** | RS YELLOW | 6 | + | + | + | + |
| | **SINT39** | RESISTANT RS YELLOW[2] | 7-8 | + | + | + | + |
| | **SINT19** | RESISTANT ORANGE[2] | 7-8 | + | + | + | + |
| | **SINT40** | RESISTANT RED 032[2] | 6 | + | + | + | + |
| | **SINT80** | RESISTANT SCARLET | 8 | + | + | + | + |
| | **SINT44** | RESISTANT MAGENTA[2] | 6 | + | + | + | + |
| | **SINT56** | RESISTANT RHODAMINE[2] | 7 | + | + | + | + |
| | **SINT64** | RESISTANT VIOLET[2] | 6-7 | + | + | + | + |

[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 may differ in shade from the equivalent non-resistant colour.
[3] Contains dye complex (E.g. Fanal) pigment which may bleed/migrate under certain conditions and which may fade prematurely if used at low levels in colour blends.
[4] Contains Barium
[5] Available only as finished in, not possible to blend from SolarVerse bases and Technology Varnish.
Test Methods available on request.

The **SolarFlex Pantone®** inks (**SINTP**xx) below are close matchings to the Pantone® basic colours and can also be blended from **SolarVerse UV Flexo bases** and **SINT00 - SolarFlex® Integra Technology Varnish**. These can be ordered directly from a Sun Chemical branch or blended at a printer.

| | Code | Description | Lightfastness Full strength | Alkali | Alcohol | Soap | Grease |
|---|---|---|---|---|---|---|---|
| Standard Pantone Colours | **SINT48**[5] | TRANSPARENT WHITE | N/A | N/A | N/A | N/A | N/A |
| | **SINT01**[5] | CLEAR EXTENDER | N/A | N/A | N/A | N/A | N/A |
| | **SINT45**[5] | OPAQUE WHITE | 8 | + | + | + | + |
| | **SINTP15** | PANTONE® YELLOW | 5 | + | + | + | + |
| | **SINTP12** | PANTONE® YELLOW 012 | 5 | + | + | + | + |
| | **SINTP21** | PANTONE® ORANGE 021 | 4 | + | - | + | + |
| | **SINTP31** | PANTONE® WARM RED[4] | 3[1] | - | + | + | + |
| | **SINTP23** | PANTONE® BRIGHT RED | 4 | + | - | + | + |
| | **SINTP32** | PANTONE® RED 032 | 6 | + | + | + | + |
| | **SINTP42** | PANTONE® RUBINE RED | 5[1] | - | + | - | + |
| | **SINTP55** | PANTONE® RHODAMINE RED[3] | 3 | - | - | - | - |
| | **SINTP56** | PANTONE® PINK[2] | 7 | + | + | + | + |
| | **SINTP51** | PANTONE® PURPLE | 3 | - | - | - | - |
| | **SINTP57** | PANTONE® MEDIUM PURPLE | 6-7 | + | + | + | + |
| | **SINTP52** | PANTONE® VIOLET[3] | 4 | - | - | - | - |
| | **SINTP72** | PANTONE® BLUE 072 | 6-7 | + | + | + | + |
| | **SINTP63** | PANTONE® DARK BLUE | 6-7 | + | + | + | + |
| | **SINTP61**[5] | PANTONE® REFLEX BLUE[3] | 3[1] | - | - | - | - |
| | **SINTP16** | PANTONE® PROCESS BLUE | 7 | + | + | + | + |
| | **SINTP71** | PANTONE® GREEN | 7 | + | + | + | + |
| | **SINTP50** | PANTONE® BLACK | 8 | + | + | + | + |

Test Methods available on request.
[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 may differ slightly in shade from the equivalent non-resistant colour.
[3] Contains dye complex (E.g. Fanal) pigment which may bleed/migrate under certain conditions and which may fade prematurely if used at low levels in colour blends.
[4] Contains Barium
[5] Available only as finished in, not possible to blend from SolarVerse bases and Technology Varnish.

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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