

# SolarScreen® Silicone-Free White SRSF54

Part of the SOLARIS® System

## 1. Description

**SolarScreen® Silicone-Free White SRSF54** is a UV Rotary Screen Silicone-Free White ink intended for printing labels, tags, sleeves, tickets and other applications in the narrow web market.

## 2. Product Features\*

- Silicone free technology makes **SRSF54** receptive to combination printing with the majority of flexographic, letterpress and lithographic inks without any prior modification
- **SRSF54** is receptive to overprinting with **SOLARSCREEN SUNMATCH** blending colours, but cannot be printed on top of these inks.
- Excellent fast cure response
- NVC Free
- Viscosity-modified for faster rotary screen printing.

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

## 3. Product Suitability\*

### 3.1 Applications

**SolarScreen® Silicone-Free White SRSF54** is intended for use in the following areas:

- Rotary Screen printing of plastic labels and films for toiletries, detergents, alcohols etc.
- Combination printing with other Sun Chemical UV Flexo and UV Offset products.

**SolarScreen® Silicone-Free White SRSF54** is **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.
  - Should not be blended with colours

**SolarScreen® Silicone-Free White SRSF54** 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

**SolarScreen® Silicone-Free White SRSF54** is ideally suited for most commonly used label substrates including paper, PVC, top coated polyethylene and polypropylene, and corona discharge treated polyethylene, polypropylene and PET. When using corona discharge treated stocks, substrate wetting may be further improved with in-line corona treatment.

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 prior to a full-scale production run, 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.

Edge curl can be a problem when some UV curing inks are applied as a 'bleed-off' on self adhesive materials. However, **SolarScreen® Silicone-Free White SRSF54** has been developed in conjunction with major laminate suppliers and exhibit excellent lay flat properties. However, this is dependent on the grade of self adhesive materials and the quality of the adhesive used.

The problem is exaggerated when excessive cure or heavy ink deposits are used, but may be avoided by leaving an un-printed border. As a number of factors 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, please refer to your local SunChemical representative.

## 4. Safety, Health and Environment

**SolarScreen® Silicone-Free White SRSF54** 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

**SolarScreen® Silicone-Free White SRSF54** is supplied in 5 Kg tamper-evident black plastic buckets or 200 Kg barrels. 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).



## 5. Printing Conditions

**SolarScreen® Silicone-Free White SRSF54** should be mixed thoroughly before use.

### 5.1 Printing Materials

High quality stencil materials should be used and will enhance the quality of print. A number of compatible products are available from Sun Chemical.

### 5.2 Additives

**SolarScreen® Silicone-Free White SRSF54** is supplied at press-ready viscosity and does not normally require modification. However, should thinning be necessary, small additions (up to 5%) of viscosity modifier TU01 can be made.

The use of adhesion promoter (551-903 at 2–3%) enhances adhesion to 'difficult' stocks and offers improved water and alcohol resistance. Once adhesion promoter is added the inks will remain usable for up to 24 hours, after which one further addition can be made to restore the properties (it is recommended that only one further addition is made before the ink is discarded).

If required, to increase cure response accelerator solution DP1750 may be added to the ink at a maximum of 3%

### 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.

To prevent cross-contamination, special care should be taken to thoroughly clean all processing equipment before changeover to or from **SRSF54**.

## 6. End-Use Safety / Assumptions

Acceptable technical performance of **SolarScreen® Silicone-Free White SRSF54** 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.

**SolarScreen® Silicone-Free White SRSF54** is 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.

Please see [www.sunchemical.com](http://www.sunchemical.com) for further information on Sun Chemical products and services and contact your local Sun Chemical representative for specific product advice.

SolarScreen®, SunChemical® and Solaris® are registered trademarks of Sun Chemical.