

SPEF854:SUNSTAR DFC AMBIENT 22854

From the SunSpec
family of speciality
packaging
formulations

1. Description

SUNSTAR SPEF854 is an **aqueous direct food contact heat seal adhesive** intended for application to carton board and natural fibre packaging, using either printing inks transfer technic (flexography, gravure) or paper mill coaters (rod, air blade...).

When used as heat seal adhesive, **SUNSTAR SPEF854** is out of scope of the Single Use Plastic Directive (SUPD) as adhesives are excluded.

When used as an overprint varnish on top of inks as per Eupia definition, **SUNSTAR SPEF854** is defined as part from printing inks according the same Eupia definition. If this definition of printing inks is recognized by a country regulating locally the SUPD, then **SUNSTAR SPEF854** would be directly excluded from the SUPD scope as inks are already excluded.

When used without printing inks and not as an adhesive, **SUNSTAR SPEF854** cannot be used as main structural component. It needs to be printed on a paper substrate. As such Sun Chemical's interpretation is that it is not a plastic as defined in the SUPD nor the Plastic Regulation 10/2011, and it is excluded from the SUPD scope.

As the SUPD is a Directive, it needs to be transposed to EU member state national law. In the process, some variations may happen in interpretation and implementation, so precise scope evaluation can only be done at country level.

SUNSTAR SPEF854 is suitable for food packaging in Europe in both non-direct and direct food contact applications, including applications where operating temperatures are below or at ambient. The adhesive imparts good water and grease resistance properties.

2. Product features*

SUNSTAR SPEF854 benefits:

- **Very good heat sealability**
- **Overprint varnish for Direct Food Contact inks.**
- **Home and industrial compost certified**
- Good oil and grease resistance
- Good water resistance

*Specific application performance data, where available can be provided by your Sun Chemical representative.

3. Product Suitability*

3.1 Applications

SUNSTAR SPEF854 is intended for use in the following areas:

- Paper or board packaging at temperatures below or at ambient (<48°C)



SUNSTAR SPEF854 should not be used for other end uses without prior discussion with your local Sun Chemical representative. The generic scope of compliance is based mainly on raw materials listing from European or other regulations (BfR, FDA...).

With extra care in due diligence, SUNSTAR SPEF854 may be tested for use in the following areas:

- Short term contact with food at temperature above ambient temperatures (>48°C), such as hot food filling, fast food packaging.
- In situations where high coating weights of **SPEF854** are used in combination with fatty foods then it is critical that migration testing is done. The **SPEF854** contains a low SML (0,05 mg/kg food) substance that may migrate over its SML in such conditions.

SUNSTAR SPEF854 is **not** designed for:

- Ovenable (>170°C)
- Replacing a functional barrier against migration

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

4. General Handling

4.1 Storage

SUNSTAR SPEF854 is not considered flammable. Storage temperature should be between 5 and 30°C. Avoid freezing and direct sunlight. **SUNSTAR SPEF854** has a shelf life of 6 months from date of manufacture in unopened containers under above conditions.

4.2 Waste disposal

Care should be exercised in the disposal of formulation waste. This should be carried out in accordance with good industrial practice, observing all the appropriate regulations and guidelines.

For more specific handling advice refer to the Safety Data Sheet (SDS).

5. Printing Conditions

5.1 Printing Viscosities

Recommended printing viscosity is dependent on application method. Please refer to your local Sun Chemical representative for specific details.

SUNSTAR SPEF854 is supplied at a viscosity of between 26 and 33 second DIN 4 cup (30 to 40 second Afnor4).

Solids level 49 +/- 2%.

pH is 8.2 - 8.8.

SUNSTAR SPEF854 must thoroughly be stirred and homogeneous before reducing with solvent.



5.2 Reducing solvents

Water or water / alcohol (ethanol, iso-propanol or normal propanol) blends. Typical blends would be as follows:

- Fast: Alcohol / Water 1:1
- Normal: Alcohol / Water 1:3
- Slow: Water

5.3 Wash up solvents

Water

5.4 Application film weights

All properties are dependent on the coat weight applied and the integrity of the adhesive. Dry coat weights of between 3 and 15 g/m² are recommended depending of the application. Maximum adhesive integrity can most of the time best be achieved through the application of 2 hits to obtain the overall recommended weight.

6. End-use safety

Sun Chemical products are formulated to the latest EuPIA guidelines. 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 (previously R45, R46, R49, R60 or R61 according to the Dangerous Substances Directive 67/548/EEC), in addition to toxic or highly toxic materials with hazard statements H300, H301, H310, H311, H330, H331, H370 or H372 (or R-phrases R23, R24, R25, R26, R27, R28 or R39) and pigments based on compounds of Sb, As, Cd, Cr (VI), Pb, Hg, Se. The use of certain dyes, solvents, plasticisers and miscellaneous materials are also excluded. A copy of the document is available on request.

Combination of Sun Chemical products with products from other manufacturers may affect the suitability of the Sun Chemical product for specific end uses and/or applications. It is advised that in such circumstances the user undertakes a detailed risk assessment to ensure that safety is not compromised.

Acceptable technical performance of varnishes is dependent on:

- Control of product application weight (inks varnishes and adhesives)
- Adequate drying on press (to ensure that the print is dry before conversion)
- Appropriate packaging design, structure and end-use application
- Measurement and compliance of any migratable substances within the finished packaging structure
- Suitable adhesive used in accordance with supplier recommendations

The choice and control of substrate, design (including coverage and coat weight), process conditions (e.g. to ensure proper drying) and any materials from other suppliers are printer or converter technical requirements. Sun Chemical's technical team can provide assistance in the form of suggestions or direct support for our products.

Food Packaging: It is the ultimate responsibility of the food packer to ensure packaged food is safe. With regard to potential migration of substances into the foodstuff from the



printed packaging, it is the responsibility of the converter and food packer to ensure that migration does not exceed any permitted regulatory limitations.

To fulfill its responsibility within the supply chain and following the signing of a legally binding mutual non-disclosure agreement, Sun Chemical will provide details to the customer of any potential migratable components present in its products through the preparation and communication of a 'Statement of Composition'.

7. Disclaimers

Direct food contact products are formulated and manufactured for application to the inside surface of food packaging. In this scenario direct contact with the packaged foodstuff is likely to occur. Product resistance should form part of the printer converters wider risk assessment. Combination with other materials may invalidate the food contact status of the product. The products must be applied under relevant Good Manufacturing Practices (GMP) and according to the recommendations of this Technical Data Sheet.

The information contained herein is based upon data believed to be up-to-date and correct at the time of writing. It is provided to our customers (and/or analytical contractors) in order that they are able to comply with all applicable health and safety laws, regulations, and orders. In particular, customers are under an obligation to carry out a risk assessment under relevant Good Manufacturing Practices (GMP) in line with EU food contact legislation and as a result take adequate risk management measures to protect food consumers.

Our Products are intended for sale to professional users. The information herein is general information designed to assist customers in determining the suitability of our products for their applications. All recommendations are made without guarantee, since the application and conditions of use are beyond our control. We recommend that customers satisfy themselves that each product meets their requirements in all respects before commencing a print run. There is no implied warranty of merchantability or fitness for purpose of the product or products described herein. In no event shall Sun Chemical be liable for damages of any nature arising out of the use or reliance upon this information. Modifications of the product for reasons of improvements might be made without further notice.

Water-based products typically contain isothiazolinone biocides, including methyl isothiazolinone, as in-can preservatives. Such biocides may cause allergic skin reactions in already sensitized individuals.

8. Technical Assistance / Contacts

For further information, please contact your local Sun Chemical representative or visit our website: <http://www.sunchemical.com>

Sun Chemical Group Coöperatief U.A.
Leeuwendeldseweg 3-T
1382 LV Weesp
The Netherlands

