

FDW145 SolarFlex® Lightning White

Part of the SOLARIS® System

1. Description

FDW145 SolarFlex® Lightning White Ink is a UV flexo first-down white ink intended for printing of labels, tags, sleeves, tickets and other applications found in the narrow web market where high opacity is required.

2. Product Features*

- High opacity and good printability for maximum covering power.
- Good adhesion to a wide range of filmic materials.
- Good receptivity to other Solaris® System colours.
- Low viscosity and good flow for optimum press performance.
- Good gloss, scratch and scuff resistance.
- Cures well under UV-LED.
- Formulated without VOCs, Benzophenone, ITX and 4-Methyl Benzophenone.
- Suitable for use with high volume aniloxes for highest opacity.

3. Product Suitability*

3.1 Applications

FDW145 SolarFlex Lightning White Ink is intended for use in the following areas:

- A first-down high opacity UV Flexo white ink.
- Grades of top-coated plastic self-adhesive labels.
- Other paper or board applications such as tags and tickets.
- Metallised carton board.
- Other filmic applications where a high opacity covering white is required.

FDW145 SolarFlex Lightning White Ink is **not** suitable for the following:

- 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.

FDW145 SolarFlex Lightning White Ink 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

FDW145 SolarFlex Lightning White Ink is suitable for most grades of label stocks commonly used in the Narrow Web industry and metallised boards in the carton packaging 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

FDW145 SolarFlex Lightning White Ink can be over-varnished to improve gloss, physical and chemical resistance properties and is suitable for hot foil stamping or cold-foil blocking when used in conjunction with the appropriate blockable overprint varnish or adhesive such as SLD008.

FDW145 SolarFlex Lightning White Ink 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

FDW145 SolarFlex Lightning White Ink 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

FDW145 SolarFlex Lightning White Ink is supplied in 5 Kg 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. Inks should be stirred gently before use.

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).

4.3 EuPIA Exclusion Policy

FDW145 SolarFlex Lightning White Ink is 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.

Version SAP00-EN
April 2020
Page 2/3



5. Printing Conditions

5.1 Printing Viscosities

FDW145 SolarFlex Lightning White Ink is 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

FDW145 SolarFlex Lightning White Ink is a silicone-free formulation so ensure the parts of press that will come into contact with the ink are fully clean before use.

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

FDW145 SolarFlex Lightning White Ink is 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

For standard applications, aniloxes of approximately 10cm³/m² are recommended. High filmweights of UV flexo ink can result in reduced adhesion

6. End-Use Safety/Assumptions

Acceptable technical performance of **FDW145 SolarFlex Lightning White Ink** is dependent on:

- Control of film weight.
- A clean working environment.
- Adequate curing on press to ensure that the print is fully cured before conversion.

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.

FDW145 SolarFlex Lightning White Ink 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 for further information on Sun Chemical products and services and contact your local Sun Chemical representative for specific product advice. SolarFlex®, SunChemical® and Solaris® are trademarks of Sun Chemical