

SunCure® UCX55 Rhodamine

UV Curable Offset Ink for Packaging and Narrow Web Applications

1. Description

SunCure® UCX55 is a highly versatile UV curable lithographic ink designed for outer surface printing of carton board and foil boards, selected plastics and non-absorbent substrates. SunCure® UCX55 is also designed for the printing of labels, sleeves, tags and tickets. UCX55 is formulated with materials used in the low migration inks SunCure® FLM but **SunCure® UCX55** contains a Fanal Rhodamine pigment which has the propensity to bleed/ migrate into and through certain substrates.

2. Product features

- Sheetfed or web offset printable
- Adhesion to a wide range of paper, board and synthetic substrates
- Lowest migration potential of binders and photoinitiators, as certified by independent laboratories
- Excellent taint and odour properties
- Suitable for in-line or off-line coating, foil stamping and lamination
- Made using specially selected raw materials from audited vendors
- Manufactured only from substances listed in Annex 1 and Annex 6 of the Swiss Packaging Inks Ordinance**
- Formulated without the use of Bisphenol A or materials based on Bisphenol A

3. Product Suitability

3.1 Applications

SunCure® UCX55 is intended for use in the following areas:

- Paper and carton board, non-food packaging
- Luxury packaging, such as liquor or cosmetic cartons
- Plastic packaging, on appropriately selected substrates
- Paper and top coated plastic self-adhesive labels
- Appropriately selected sleeve plastics, including shrinkable plastics
- Primary outer wrap packaging for food, subject to specific conditions of use***
- Applications where the use of Fanal pigments have been found to be suitable.

SunCure® UCX55 should not be used in the following areas:

- Microwave or ovenable applications
- Direct food contact
- Applications where Fanal pigments are not suitable

Printers should assure themselves that use of this product on food packaging has been fully assessed for risk and that the packaging produced meets regulatory requirements for the intended end use. Whilst SunCure® is versatile in performance, it may not be suitable if used outside the above described applications. If in doubt, please check suitability with your local Sun Chemical representative.

**The binder system is proven in low migration applications but UCX55 contains a Fanal pigment which has the propensity to bleed/migrate into and through certain substrates*

*** Ordinance of the Federal Department of Home Affairs (FDHA) on Materials and Articles (817.023.21) Section 8b:Packaging Inks (Annex 6 revision 25.11.09).*

**** ONLY where the packaged goods are retained within an absolute or functional migration barrier OR the printed packaging has been tested in conditions of use and shown to conform to regulatory requirements. Printers should assure themselves that use of these products on food packaging has been fully assessed for risk and the packaging so produced meets end use requirements. Whilst SunCure® Starlux inks are versatile in performance, they may not be suitable if used outside the above defined applications. If in doubt, please check suitability with your local Sun Chemical representative.*



3.2 Substrates

SunCure® UCX55 is suitable for use on paper and carton board and a wide range of non-absorbent substrates. Corona treatment is recommended for non-top-coated plastic substrates to ensure an optimum treatment level of 38-44 mNm⁻¹. Note: there is significant variation between different grades of substrates. The printer should follow specific advice from their substrate manufacturer and make any tests necessary to prove performance under realistic conditions before commencing with commercial printing. The Fanal pigment in UCX55 has the propensity to bleed into certain substrates in a stack or reel so checks should be made before a commercial print run to ensure migration of the pigment does not occur.

3.3 Print Finishing

SunCure® UCX55 can be coated to improve gloss, physical and chemical resistance properties. A range of SunCure® coatings are available for use with the ink, to ensure a complete low migration package solution. Please contact your Sun Chemical representative for specific recommendations. SunCure® UCX55 printed materials can be successfully laminated in-line or off-line using solventless adhesives, using standard converting processes.

4. Safety, Health and Environment

4.1 Product Handling

SunCure® UCX55 should be used in accordance with normal standards of industrial hygiene and good working practice. Please refer to the SunCure UCX55 product Safety Data Sheet for specific information.

4.2 Manufacturing and Materials

SunCure® UCX55 is made using Good Manufacturing Practice and in accordance with the latest EuPIA Guidelines on Printing Inks Applied to the Non-Food Contact Surface of Food Packaging Materials and Articles. (See www.eupia.org for details)

4.3 Storage

SunCure® UCX55 is supplied in 3 kg black plastic buckets. Shelf life is at least one year from date of manufacture, when stored in original unopened containers between 5° and 25°C and protected from direct sunlight. The ink may remain useable for longer periods, but once it have reached this age should be checked before use. If in doubt, please contact your Sun Chemical representative for advice. Inks returned from press that have not been contaminated in any way should be re-used within three months.

4.4 Waste Disposal

Printing inks, coatings and printing residues should be disposed of in accordance with Local, EU and National regulations. Please refer to the product Safety Data Sheet for additional information.

5. Printing Conditions

5.1 Printing Conditions

SunCure® UCX55 is supplied press-ready and should not need adjusting under normal printing conditions. Where possible, use of additives should be avoided. The press and roller system should be thoroughly cleaned to avoid cross-contamination of SunCure® UCX55 by products previously used.



5.2 Additives

A number of press-side additives are available for adjusting properties in non-standard conditions or applications, where press adjustment has not achieved a satisfactory result. As a general principle, use of additives should be a last resort, when process adjustment has not solved particular application issues. Furthermore, the maximum addition level should be respected, to avoid the potential creation of other issues.

5.3 Wash Up

A variety of proprietary wash-up solutions are available which are suitable for use with UV inks and press components, including rollers, blankets and plates.

5.4 Fountain Solutions

Depending on press type and substrate, a number of **SunFount®** fountain solution additives are available for use with SunCure® UCX55 from Sun Chemical, to provide optimum emulsification and printing properties. This ink is usually run with low or no alcohol founts and SunFount® 480 and 485 are proven products for most applications

Please contact Sun Chemical customer technical services or your Sun Chemical representative for consumables advice and recommendations.

6. End-Use Safety / Assumptions

Acceptable technical performance of SunCure® UCX55 is dependent on:

- The application of Good Manufacturing Practice
- The press being fitted for UV printing, including suitable rollers, blankets and plates
- The press and associated equipment being free from contamination from previously used products
- Control of film weight and print density
- Adequate curing capacity on-press to ensure that the print is fully cured before conversion
- Appropriate packaging design and structure

Choice and control of film weight, curing and substrate are printer technical requirements for which Sun Chemical can not accept responsibility.

To fulfil its responsibility within the supply chain, Sun Chemical will provide on request, under non-disclosure agreement, information regarding potential migratable components, where present, in inks that are intended for food packaging applications.

For further information on Low Migration printing, please refer to Sun Chemical's Best Practice Guide: **DESIGNING PACKAGING WITH CERTAINTY – A BEST PRACTICE GUIDE** (available by e-mailing to packaging@sunchemical.com)

The information contained herein is based on data believed to be up-to-date and correct at the time writing. It is provided to our customers 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 measures to protect food consumers.



7. SunCure® UCX55 Product Information

Product	Product Code	Lightfastness # Full Strength	Alcohol #	Alkali #
Rhodamine	SunCure® UCX55	4	-	-

Test methods are available on request. Note: Resistance properties relate to the pigments used in the ink, not the resistance properties of the cured ink film.

Lightfastness is measured according to the Blue Wool Scale. Under wet conditions such as during external exposure lightfastness is significantly worse for certain colours. Please consult our technical services for recommendation on alternative shades or blend formulations. Resistant colours may differ slightly in shade from the equivalent non-resistant colour.

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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.

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