SunLit® Diamond

1. Description

SunLit Diamond is an innovative sheetfed offset printing ink for paper and board. SunLit Diamond is applicable for publication, commercial and packaging printing on straight and perfecting presses.

2. Product features

SunLit Diamond inks:

- are available as a 4 process colour offset ink set
- are vegetable based and free of mineral oils
- are duct fresh
- comply with the ISO 2846-1 and allow printing in accordance to the international standard norm ISO12647-2
- are drying by penetration and oxidation
- contain 78-82% of renewable materials determined by an independent institute by the so called C^{14} method.
- are free of cobalt based drying catalysts

3. Product Suitability

3.1 Applications

SunLit Diamond is intended for use in paper and board offset printing. The ink is suitable for all types and all sizes of sheetfed offset printing machines.

The ink is not suitable for the following applications:

- Printing on foils or non-absorbent substrates
- SunLit Diamond Magenta and Yellow are not suitable for poster printing
- Food packaging applications without functional barrier
- Waterless offset printing

3.2 Substrates

SunLit Diamond inks are suitable for the following substrates:

- Any kind of matt/silk coated paper
- Any kind of gloss coated paper
- Any kind of uncoated paper (“offset paper”)
- Any kind of coated and uncoated cardboard

NB: The paper quality will influence the drying performance and the gloss of the print.

3.3 Varnishability

Printed sheets with SunLit Diamond can be overprinted either with an oil based overprint varnish or a water based overprint varnish.

When applying inline UV coatings a suitable primer is mandatory. When offline UV coating is applied, a water based primer is recommended or a waiting time of at least 48h is necessary.

4. Colour Range

SunLit Diamond is supplied as finished inks.

The following table sums up the light fastnesses and the resistancies corresponding to the 4 process colours:

PROCESS COLOURS	PRODUCT CODE	LIGHT FASTNESS ISO 12040**	ALCOHOL ISO 2836**	SOLVENT MIXTURE ISO 2836**	ALKALI ISO 2836**
SUNLIT DIAMOND Process Black	**DIA46**	8	-	-	+
SUNLIT DIAMOND Process Cyan	**DIA25**	8	+	+	+
SUNLIT DIAMOND Process Magenta	**DIA27**	5	+	+	-
SUNLIT DIAMOND Process Yellow	**DIA26**	5	+	+	+
SUNLIT DIAMOND Process Yellow G/S	**DIA41**	5	+	+	+

** For more information regarding these standards, please contact your local Sun Chemical representative.

5. General Handling

5.1 Storage

SunLit Diamond inks should be stored at ambient temperature between 5°C and 35°C. Under these conditions SunLit Diamond inks have a shelf life of at least 36 months in an unopened vacuum-packed tin.

Inks supplied in drums or pails should be used within 12 months after production. Drums and pails having exceeded 12 months may be fit for purpose but must be inspected before usage. Critical is the formation of skin where there is surface contact with air (oxygen). Minor appearance of skin shall be removed provided that the ink underneath is skin-free. In either case, once the container is opened, the ink should be worked off in a timely manner.

The polypropylene ink cartridge is not a barrier to air. Oxygen diffused in the printing ink may initiate premature drying, particularly at elevated temperatures and extended storage times. Previous experience has shown that the printing inks can be used for one year after manufacturing after being stored and transported at ambient temperature and humidity.

5.2 Waste disposal

Waste disposal should be carried out in accordance with good industrial practice, observing all the appropriate local, national and regional regulations and guidance.

6. Printing Conditions

6.1 Fount Solution

SunLit Diamond is not required to run with a special fount solution. However Sun Chemical recommends the use of SunFount products to achieve optimal performance:

SunFount® 410; suitable for 5-7% IPA in normal water qualities

SunFount® 480; suitable for 3-6% IPA, to prevent roller glazing

SunFount® 455; suitable for 0-5% IPA, adapted for IPA free printing

The quality of the water and the overall printing conditions has a strong impact on the choice of fountain solution and the level of IPA required. Please consult our technical services for assistance.

6.2 Printing Plates

SunLit Diamond can be run with any type of aluminium based printing plates (CtP plates, conventional positive or negative plates).

6.3 Influence of IR drier

The use of IR drier is not recommended as it might lead to an increased tendency of set off in the delivery pile.

6.4 Press cleaning

After having printed with SunLit Diamond ink the press can be easily cleaned using standard press washes.

7. End-use safety

All Sun Chemical Europe printing inks and related materials are formulated in accordance with the CEPE/EuPIA Exclusion Policy. 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. None of the raw materials used in inks supplied intentionally contain the heavy metals Antimony, Arsenic, Cadmium, Chromium

(VI), Lead, Mercury, Selenium. A copy of the document is available on the EuPIA website: http://www.eupia.org

SunLit Diamond also complies with EN71/3 (suitability for toy packaging).

8. Technical Assistance / Contacts

For further information, please contact your local Sun Chemical team

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9. Disclaimer

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.