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Novasens® BCS PLANET

The extremely low-migration and low-odour series with a Cradle to Cradle certification

Base colour ink series for sheetfed offset

Product features

- Novasens® BCS PLANET is a highly pigmented, extremely low-migration, low-odour base and Cradle to Cradle Certified™ colour ink series which has been developed especially for sensitive food and semi-luxury food applications, where there is no direct contact between the printed image and the contents of the package.
- Novasens® BCS PLANET consists on 10 base colour inks plus black and transparent white and is supplemented by 3 inks with particularly high fastness properties. All base colour inks are resistant to water-based coating. The series is optimally suited for mixing colour shades of the PANTONE® fan. Besides that it can also be used to mix any other colour shade with specific fastness properties, as is often required in packaging printing. The base colour inks are formulated with optimised colour strength.
- The series is excellently suited both for the latest generation printing presses and machines of older design and construction.
- Further benefits of Novasens® BCS PLANET are the excellent colour intensity, high brilliance and very good printability.
- Novasens® BCS PLANET is particularly suited for the production of packaging that complies with the requirements of the EU-regulation 1935/2004 and 2023/2006 as well as with the Swiss Ordinance 817.023.21. Mineral oil is not used as an intentional formulation component of this series. The release of aldehydes on neutral substrates is below the detection limit.

Advantages of Novasens® BCS PLANET

- Cradle to Cradle Certified™.
- Extremely low-migration and low-odour.
- The base colour ink series complies with requirements for printing inks for food packaging.
- Highly pigmented.
- High brilliance.
- Low swelling.
- Excellent colour intensity.
- Ideally suited for gloss coated papers and board.

K+E

CERTIFIED cradle to cradle BRONZE

FlintGroup

Novasens® BCS PLANET

		Fastness properties/opaqueness							Printing properties							
		Opaqueness	Light 100 %	Light 10 %	Ethanol	Solvent mixture	Alkali	Caustic soda solution	Gloss	Setting	Oxidative drying	Rub resistance	Rapid further processing	Suitability for gloss coated papers/board	Suitability for uncoated papers/board	Suitability for matt coated papers/board
Novasens® BCS PLANET	**Article code**								4	3	1	2	3	6	4	6
Yellow	**VZ45-100I**	t	5	3	+	+	+	+								
Resistant Yellow	**VZ45-153I**	t	6-7	5-6	+	-	+	+								
Orange	**VZ45-200I**	t	5	3	+	+	+	+								
Red 032	**VZ45-302I**	so	5	3	+	-	+	+								
Rubine Red	**VZ45-301I**	t	5	3	+	+	-	-								
Alkali Rst. Rubine Red	**VZ45-346I**	t	5	4	+	+	+	+								
Rst. Rhodamine Red	**VZ45-369I**	t	7	5-6	+	+	+	+								
Resistant Violet	**VZ45-450I**	t	7	6	+	+	+	+								
Process Blue	**VZ45-500I**	t	8	6-7	+	+	+	+								
Green	**VZ45-600I**	t	8	6-7	+	+	+	+								
Black	**VZ45-960I**	o	8	8	+	+	+	+								
Transparent White	**VZ45-000I**	t														

1 = Characteristic weakly expressed
7 = Characteristic strongly expressed

The assessment of the colour properties was made under standardised printing conditions. In individual cases, under special conditions, as in printing with very high ink densities, the classification of certain properties may be different.

Light fastness properties according to ISO 12040: from 1 (low) to 8 (high)

Fastness properties according to ISO 2836:
+ = Good Resistance
+/- = Partly Resistant
- = Not Resistant

Opaqueness:
o = opaque so = slightly opaque
t = transparent

Highest fastness properties	**Article code**							
R/S Yellow	**VZ45-183I**	t	6-7	5	+	+	+	+
Y/S Red	**VZ45-355I**	t	7	6	+	+	+	+
Resistant Rubine Red	**VZ45-366I**	t	7	6	+	+	+	-

You are welcome to contact us for further information.

Flint CPS Inks Germany GmbH
Commercial, Publication & Sheetfed Inks
Sieglestrasse 25
70469 Stuttgart, Germany

T +49 711 98 16-0
F +49 711 98 16-700
sheetfed@flintgrp.com
www.flintgrp.com

Novasens® BCS PLANET

Substrates

Ideally suited for gloss coated, matt coated and uncoated papers and board in combination with inline water-based coating. We recommend testing the suitability of the substrate for printing food packaging.

Drying properties

Drying by absorption.
As an extremely low-odour and low-migration ink, Novasens® BCS PLANET dries only by absorption. For this reason an inline water based coating is always necessary. The nip volume of the anilox roller should not be less then 13 cm^3.

Hints for mixing spot colours

Due to the high colour strength, the mono-pigmentation and specific fastness properties, the base colour inks of Novasens® BCS PLANETare ideally suited for easy formulation and mixing of spot colours, that are resistant to water-based coating. For mixing spot colours with a high proportion of transparent white or with special properties such as high light fastness or for special applications such as UV-varnishing, 3 base colours with specific fastness properties are available. The whole range of PANTONE® colour shades can be achieved with typical wet offset printing film weights.

Mixing books/ calibration data

Mixing formulae for all PANTONE® C and U colour shades are available in the Flint Group BCS mixing book GLOBAL PLUS. An additional mixing book with the denomination GLOBAL FAST contains mixing formulae of PANTONE® C and U colour shades with enlarged fastness properties, which for example may be requested due to the subsequent print finishing process. Both mixing books, as well as calibration data for computerised ink formulation with X-Rite Ink formulation can be made available upon request.

Special notes

Novasens® BCS PLANETis particularly suited for the production of packaging that complies with the requirements of the EU-regulation 1935/2004 and 2023/2006. Additionally the series meets the requirements of the EuPIA Guideline „Printing Inks applied to the non-food contact surface of food packaging materials and articles“ and the „Guidance Note on Packaging Inks“published by Nestlé.
We recommend Hydrofast® AFS 359 Novasens fountain solution for alcohol reduced or alcohol free printing.
If the printing press was previously running with conventional inks, it should be thoroughly cleaned and all ink residues have to be removed before printing with low-migration inks. For this purpose, only washes suitable for low-migration printing should be used, taking into account the manufacturers` recommendations for use. Flint Group recommends Varn® Non-VOC Wash or
Varn® V60 Plus for this purpose. Following the wash cycle, thorough rinsing with clean water is essential.
Heating of printed packaging in an oven has to be carefully considered due to the potential appearance of temperature peaks. In contrast, microwave heating of packaging without acceptor laminate is non-critical. Generally the heating of packaging to temperatures exceeding 200 °C must be avoided.
Due to the drying characteristics of these inks the suitability for hot foil stamping should be tested before starting a print run.

Additives

Never add driers to the inks or fountain solution. If there is a need for tack reduction, for example when printing on sensitive substrates, use only special Novasens PREMIUM Reducer or Novasens PREMIUM Reduxpaste.

Further products

Novasens® P 690 PLANET – extremely low-odour and low-migration special process series

Migration test

A migration test according to DIN EN 14338 was made under worst case conditions (320% ink coverage) on Invercote 180 g/m^2. The test revealed that the migration of substances fell below the 60ppm limit by a factor of more than 10. (Based on the EU convention whereupon 6 dm^2 packaging surface correlates with 1 kg food). A copy of this report is available upon request.

Further information

For further information please refer to our Technical Reviews regarding food packaging printing, such as “Sheetfed inks for food packaging printing“ or “Mixing of low-migration inks”.

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Flint CPS Inks Germany GmbH
Commercial, Publication & Sheetfed Inks
Sieglestrasse 25
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T +49 711 98 16-0
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