

# Novasens® P 660 PREMIUM

The low-migration and extremely low-odour series

# Special process inks for sheetfed offset

#### **Product Features**

- Novasens® P 660 PREMIUM is an extremely low-odour and low-migration special process series which
  has been developed specially for sensitive food and semi-luxury food applications, where there is no direct
  contact between the printed image and the contents of the package.
- Further advantages of the series are very good printability and a high press stability.
- Due to its very high colour strength Novasens® P 660 PREMIUM allows printing with a very thin ink film, resulting in fast setting and brilliant performance in terms of inline-coating.
- Novasens® P 660 PREMIUM is manufactured in a dedicated facility for production of sheetfed inks for food packaging printing.
- The series is ideally suited for straight-line printing on all multi-colour printing presses.
- Novasens® P 660 PREMIUM 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. 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". 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® P 660 PREMIUM

- Low-migration and extremely low-odour.
- The series complies with the requirements for printing inks for food packaging (according to EuPIA Guideline).
- Very high colour strength.
- Low swelling.
- Good performance in the stack.
- Suited for printing work corresponding to ISO 12647-2.
- Ideally suited for gloss coated papers and board.



# Novasens® P 660 PREMIUM

|                                   | Fastness properties  |         |                 |        | Printing properties   |       |         |                  |                |                          |   |                                       |  |
|-----------------------------------|--|---------|-----------------|--------|---|-------|---------|------------------|----------------|--------------------------|---|---------------------------------------|--|
|                                   | Light fastness   | Alcohol | Solvent mixture | Alkali | Dot gain  | 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® P 660 PREMIUM           |  |         |                 |        | 6   | 4     | 3       | 1                | 2              | 3                        | 6   | 4                                     | 6  |
| Novasens® 1 P 660 PREMIUM Yellow  | 5  | +       | +               | +      | 1 = Characteristic weakly expressed 7 = Characteristic strongly expressed   |       |         |                  |                |                          |   | pressed                               |  |
| Novasens® 2 P 660 PREMIUM Magenta | 5  | +       | +               | -      | The assessment of the colour properties was   |       |         |                  |                |                          |   |                                       |  |
| Novasens® 4 P 660 PREMIUM Cyan    | 8  | +       | +               | +      | 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. |       |         |                  |                |                          |   |                                       |  |
| Novasens® 660 PREMIUM Black, fast | 8  | +       | +               | +      |   |       |         |                  |                |                          |   |                                       |  |
|                                   | Light fastness properties according to ISO 12040: from 1 (low) to 8 (high)  Fastness properties according to ISO 2836: |         |                 |        |   |       |         |                  |                |                          |   |                                       |  |
|                                   | + = Resistance provided - = Resistance not provided  |         |                 |        |   |       |         |                  |                |                          |   |                                       |  |

**Drying Properties** 

Drying by absorption.

**Substrates** 

Ideally suited for gloss and matt coated papers and board in combination with inline water based

coating.

**Remarks** 

As an extremely low-odour and low migration ink Novasens® P 660 PREMIUM dries only by absorption. For this reason an inline water based coating is always necessary (Novaset® 4211/40 gloss coating or Novaset® 4400/40 matt coating).

The nip volume of the anilox roller should not be less then 13 cm<sup>3</sup>.

Suited for printing work corresponding to ISO 12647-2.

You are welcome to contact us for further information.

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#### **Special notes**

Novasens® P 660 PREMIUM 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. 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".

As fountain solution we recommend Hydrofast AFS 359 Novasens for alcohol reduced respectively alcohol free printing.

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.

We recommend testing the suitability of the substrate for the printing of food packaging.

In case 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 the 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.

### **Migration test**

A migration test according to DIN EN 14338 was made under worst case conditions (320% ink coverage) on Invercote 180 g/m². 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 dm² packaging surface correlates with 1 kg food). A certificate is available upon request.

### **Further information**

For further information regarding sheetfed printing inks for food packaging please refer to our corresponding Technical Review.

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Flint Group Packaging & Narrow Web Sieglestrasse 25 70469 Stuttgart, Germany T +49 711 98 16-0 F +49 711 98 16-700 sheetfed@flintgrp.com www.flintgrp.com Product names followed by  $\circledR$  are trademarks registered by Flint Group (represented by Flint Group US LLC or Flint Group Germany GmbH).

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