

## Metallics Bio NG

The **Metallics Bio NG** Pantone series is a sheet-fed offset inks formulated using vegetable ester technology (mineral oil free).

The **Metallics Bio NG** Pantone series is characterized by:

- Mineral oil free formulation
- With excellent printability
- Oxidative drying
- For press stability
- To meet today's demands
- Optimized for easy handling
- Very good optical effects, like gloss and metallic effect, comparable to mineral oil based inks

The oxidative drying ink series **Metallics Bio NG** may release odour-generating by-products during the drying process and is neither low-migration nor low-odour. Therefore, it might contain unevaluated substances with the potential to migrate. Further essential measures for food packaging inks like specific raw material selection, analytic control of raw materials and final products on composition and impurities, GMP production, can't guaranteed for this ink series **Metallics Bio NG**. **Therefore, DEUTSCHE DRUCKFARBEN does not generally recommend this ink series for the production of packaging for food, beverages and tobacco, without the customer proving suitability of this ink series for the specific application via a migration test or other measures (e.g. use of functional barriers in the packaging design).**

The formulations of the products in this ink series comply with the French mineral oil regulation that will come into force in 2025 and meet the required limits. The background to this legislation is the safe recycling of paper and cardboard packaging. This can only be guaranteed if the recycled material has a low mineral oil content.

The following limits will apply from January 2025:

- MOSH (16 to 35 carbon atoms): < 0,1%
- MOAH (1-2 aromatic rings):< 0,1%
- MOAH (3-7 aromatic rings) < 1 ppm

The **Metallics Bio NG** gold inks in PANTONE® colours are fully licensed by Pantone, Inc. and comply with colour specification. Changes in the colour specification are possible at any time on request by Pantone, Inc. and not seen as a lack of quality. Variations in colour shade can caused by different substrates, lacquers, laminates or printed colour densities.

In some cases, the use of primers to improve the substrate surface is advantageous.

**Shelf life gold inks: 12 months**

**Shelf life silver inks: 18 months**

*This technical instruction sheet is designed for your information and reference. It is based on and conforms to our current knowledge. However as actual application is affected by many factors over which we have no control, we are not liable for printing failures.*