



NewV[®] poly MGA

UV curing process inks for sheet-fed offset printing on non-absorbent substrates, for the manufacture of food packaging

NewV poly MGA inks are designed for the use on the non-food contact side of food packaging. They are also suitable for outer packaging when the inner – food contact – packaging layer does not have the right barrier properties to prevent migration from the ink/varnish layer into the foodstuff. The **NewV poly MGA** inks are recommended also for further applications where the migration of substances needs to be avoided, such as cosmetics or pharmaceutical packaging.

The **NewV poly MGA** inks have very good adhesion on non-absorbent substrates. They are suitable for sheet-fed, rotary label (letterpress) and narrow web printing with standard mercury lamp curing unit.

These inks include no volatile solvents, therefore they are VOC free.

They do not include PTFE, ITX, benzophenone and 4-methyl-benzophenone either.

Properties

- Sensory neutral
- Low swelling, optimized for NBR and EMPD rollers
- Very good adhesion on non-absorbent substrates
- Suitable for alcohol- free and reduced printing
- Fast curing
- High colour intensity
- Good dot-gain behaviour
- Good transfer
- Rapid adjustment of a stable ink / water balance
- Colour shades in accordance with ISO 2846-1
- Very good performance on high-speed presses
- Conform with the requirements of the EuPIA Exclusion Policy
- Excellent organoleptic properties („Robinson tests“ according to EN 1230 Parts 1 and 2)

Process colours	Sales code	Fastness properties according to ISO 12040 / ISO 2836				
		Light WS	Alcohol	Solvent	Alkali	UV varnish
Yellow	41 UP 4000 M	5	+	+	+	+
Magenta	42 UP 4000 M	5	+	+	-	+
Cyan	43 UP 4000 M	8	+	+	+	+
Black	49 UP 4000 M	7	+	+	+	+
Dense Black	49 UP 4010 M	7	+	+	+	+
Lightfast versions						
Yellow	41 UP 4001 M	7	+	+	+	+
Magenta	42 UP 4001 M	6	+	+	+	+

+ yes – no

Substrates

The **NewV poly MGA** series is suitable for:

- Pre-treated, non-absorbent substrates such as PE, PET, PP, BOPP, PVC, PS, etc.
- Aluminized paper and cardboard¹ stocks
- Aluminium foils¹

Application

These products are also suitable for printing in-mould labels. Considering the variety of substrates in the market, we recommend carrying out adequate testing before starting the commercial production.

The adhesion of UV curing inks and varnishes to plastic films, cast-coated stocks and pre-treated metal surfaces may be negatively influenced by separating agents, lubricants or plasticisers adhering to these surfaces (especially plastic films). We do explicitly not recommend printing on metal surfaces that are not pre-treated, due to unfavourable adhesion characteristics between the UV ink/varnish film and the substrate surface.

Favourable results of the adhesive (Scotch) tape test do not necessarily imply good scratch resistance (fingernail test). In such cases the application of a UV curing varnish can help to improve the scratch resistance. In any case, adhesive (Scotch) tape testing results must be adequate to ensure proper subsequent processing. As mentioned above, we recommend carrying out adequate testing before you start the commercial print run, due to the wide range of substrates with different properties available on the market.

When printing with UV curing inks, the dampening settings should be kept as low as possible, to avoid emulsion and ink-water balance problems.

Please consider that in case of using the printing press in dual mode (switching between standard inks/varnishes and inks/varnishes recommended for food packaging), even after a careful cleaning, the blankets, rollers, pipes may release substances that have been absorbed from standard inks which are not suitable for manufacturing food packaging. This would cause cross-contamination and negatively affect migration testing results.

For improved protection of the printed image, we recommend the application of a UV varnish. For further information please see the technical information sheets of **NewV lac MGA** varnishes and the technical information sheet *50G001 UV curing inks and varnishes for offset printing – Direction for use* on the **hubergroup** website.

Printing auxiliaries

The **NewV poly MGA** inks are ready to use products. In case small adjustments are needed for special requirements, please find the recommended additives in our technical information sheet: *NewV sup_Auxiliaries for UV food packaging printing_offset*. Only **hubergroup** auxiliaries that are explicitly recommended for food packaging are allowed to be used to safeguard the migration properties of the ink.

By the same reason we recommend special fountain solution concentrates for printing of food packaging. For further information, please see the Technical Information sheet *50.F.002 NewV fix fountain solutions for UV-curing printing inks for food packaging*.

Never use additional photoinitiators or photoinitiator pastes for these products. Never add anti-drying or anti-skin additives to the ink. to the inks or on the rollers.

¹ Non-absorbent substrates must have a surface tension of at least 38 mN/m in order to ensure optimum ink adhesion. We generally recommend running an adhesion test before beginning the actual print run.

Food and semi-luxury goods packaging

Regulation (EC) No 1935/2004 requires that materials and articles which, in their *finished* state, are intended to be brought into contact with foodstuffs or which are brought into contact with foodstuffs, must not transfer any components to the packed foodstuff in quantities which could endanger human health, or bring about an unacceptable change in the composition or deterioration in organoleptic properties.

Provided that our products cited above are used in accordance with the information given in our technical information sheets and correctly processed and cured, and provided that the food packaging is designed in a way that there is no intended food contact with the print, we hereby confirm that our products will in principle allow compliance of the final product with Regulation (EC) No. 1935/2004.

- The **hubergroup** products cited above are formulated and manufactured in compliance with the EuPIA "Good Manufacturing Practices (GMP) – Printing Inks for Food Contact Materials" published by EuPIA, the European Printing Ink Association.
- To prevent any contamination with components from conventional inks, the NewV MGA products are manufactured in a separate production area specifically designated for this purpose.
- The products are compliant with section 12 ("printing inks") of the Swiss Ordinance 817.023.21 (Verordnung des EDI über Bedarfsgegenstände vom 23. November 2005.).

The manufacturer (printer, converter) of the packaging and the filler who puts the foodstuff into the packaging have the legal responsibility to verify that the finished product fulfils the legal and industrial requirements. Migration testing with suitable food simulants is recommended, particularly in cases of high ink coverage, light weight substrates, or in cases where the packaging/foodstuff ratio differs considerably from the "EU cube" model assumption.

To allow other members of the packaging chain to assess compliance of the printed packaging with the Framework Regulation (EC) No.1935/2004, the Plastics Regulation (EU) No. 10/2011 and/or the Swiss Ordinance 817.023.21, the "Statement of Composition" (SoC) is available on request. Please note that when carrying out a risk assessment, paper, board and many plastic materials, like PE or PP are not sufficient barriers for migratable substances from UV curing inks and varnishes.

More information on the subject of packaging for food, cosmetics, pharmaceutical products and semi-luxury goods (e.g., tobacco) can be found in the information sheet *50.G.002 NewV MGA products _ UV inks and varnishes for food packaging*. Please also find information on the webpage of the European Printing Ink Association: www.eupia.org.

Shelf life

The minimum shelf life of these products is 18 months from the production date if the container is not opened. Dependent on the storing and handling conditions, the products may be usable much longer.

Further information: Store between 5 - 25°C. Higher storage temperature may reduce shelf life. Protect from frost and sunlight. The cans need to be closed back immediately after usage.

Packaging

2.5 kg cans