



Radiation-curing **CRS^{max}** MGA system

Standard basic inks and binder variants for radiation-curing offset spot colour ink mixing system
For food packaging

The radiation-curing **CRS^{max}** ink mixing system (Computer-Recipe-System) includes print ready base colours with high pigment concentration and individual fastness properties. Besides the colours, transparent white, opaque white and black can also be found in the assortment. These monopigmented basic colours with binder and photoinitiator variants fulfil the wide range of application requirements. In contrast with traditional colour communication systems the radiation-curing **CRS^{max}** allows full control on the resistance properties of the ink layer and gives special flexibility for creating a tailor made ink that fits perfectly to the required purpose.

The benefits of **CRS^{max}** system:

- Individual control on all the fastness properties
- Fast and safe matching of spot colour inks
- Smart opportunity to reduce left-over inks
- Gives possibility to rework the left-over inks that were mixed from **CRS^{max}** base inks
- Reduction of ink stock from uncountable spot colours to a few base colours
- Ability to switch between different systems using the same recipe

Applications / binder variants

The radiation-curing **CRS^{max}** is available in different binder and photoinitiator variants in order to fit to the market requirements. The printed product and the technical circumstances define which CRS family is to be used.

NewV CRS^{max} MGA inks are recommended for sheet-fed offset on absorbent substrate and were designed for food, cosmetics, pharmaceutical packaging and tobacco where the migration of ink/varnish substances is not prevented by the packaging. They are suitable for the non-food contact side of the primary packaging.

The radiation-curing **CRS^{max}** family for food packaging is:

UG...M For standard mercury lamp (eg. 41UG7801M)

Basic colours

Choosing the right base inks from the assortment has the highest importance.

For ordering, the code of the required variant (UG...M) has to be inserted into the sales code wildcard of the following two lists.

When using **CRS^{max} MGA** inks, please consider that in order to keep the migration properties of the ink, only auxiliaries that were developed for food packaging are allowed to be used.

By the same reason we recommend special fountain solution concentrates for applications where the migration from the printing components has to be avoided. For further information about them, please read the related *technical information sheet: 50.F.002 NewV fix for food packaging*.

Basic colours for absorbent substrates

The following list shows the available colours for absorbent substrates with their fastness properties:

The radiation-curing CRS ^{max} basic colours for absorbent substrates					
Colour	Sales code	Light fastness (WS)	Spirit	Solvent mixture	Alkali
Yellow	41 UG 7803 M	5	+	+	+
Yellow	41 UG 7835 M	7	+	+	+
Orange	41 UG 7804 M	5	+	+	+
Orange	41 UG 7828 M	7	+	+	+
Red	42 UG 7806 M	6	+	/	+
Red	42 UG 7808 M	5	+	+	-
Red	42 UG 7809 M	5	+	/	+
Red	42 UG 7834 M	6	+	+	+
Red	42 UG 7812 M	7	+	+	+
Violet	43 UG 7826 M	7	+	+	+
Blue	43 UG 7818 M	4	-	-	+
Blue	43 UG 7820 M	8	+	+	+
Green	44 UG 7822 M	8	+	+	+
Black	49 UG 7800 M	8	+	+	+
Opaque white	47 UG 7840 M	8	+	+	+
Transparent white	40 UG 7850 M	na.	+	+	+

+ yes - no / conditionally recommended na.= not applicable

For special applications, water-based primers can contain solvents. The radiation-curing CRS^{max} basic colours with resistance features of (/) or (-) for solvent mixture can show colour change when they are combined with these types of varnishes in one application. Please contact your varnish supplier about the necessary resistances of the ink prior to production.

Food and confectionery packaging

Regulation (EC) No 1935/2004 requires that the 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 8b ("packaging 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.

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 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 12 months from the production date if the container is not opened. But dependent on the storing and handling conditions, they can be usable much longer. For extending the warranty period, please contact our sales representatives.

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 can

200 kg drum