



CORONA®-HGA 5028

low-hexanal

The ideal special process series
for organoleptically neutral print products

Packaging for organoleptically sensitive package contents, such as foodstuffs (especially chocolate bars and chocolates/pralines) and consumables (cigarettes), must be produced using organoleptically neutral printing stocks and inks.

The following requirements apply in relation to food and consumables packaging:

- There must be no organoleptic changes (changes of odour or taste) to the package contents
- Migration must remain within the set limits
- There must be no change in the colour of the package contents.

More information on this subject can be found in the information sheet entitled „Druckfarben für Lebensmittelverpackungen“ (Printing inks for food packaging) published by the German Printing Ink Manufacturers' Association.

Investigations have revealed that any organoleptic influence packages have on their contents is closely linked with the proportion of volatile, short-chain aldehydes (C₄-C₉), in particular, hexanal. These aldehydes can arise through reaction with the oxygen in the air as the substrate and the ink interact and lead to changes in the organoleptic characteristics of the package contents.

Thanks to our newly developed CORONA®-HGA 5028 ink series, it is now, for the first time in the field of packaging, possible not only to produce outstanding print results but also to as good as completely prevent the formation of short-chain aldehydes and thus to obtain optimum organoleptic values in the process.

Migration and invisible set-off must be prevented by ensuring suitable processing conditions and selecting a substrate or primary packaging with adequate barrier properties.

MGA-CORONA® sheet-fed offset inks, MGA-ACRYLAC® water-based coatings and MGA® fount concentrates together constitute a low-migration system ideal for producing food packaging made of paper and cardboard.

CORONA®-HGA 5028		Fastness properties per DIN 16 524/25				
		Light WS	Alcohol	Solvent mixture	Alcali	Drying
Yellow	41 HGA 5028	5	+	+	+	by setting only
Magenta	42 HGA 5028	5	+	+	-	by setting only
Cyan	43 HGA 5028	8	+	+	+	by setting only
Black	49 HGA 5028	8	+	+	+	by setting only

Naturally, in addition to the process colours, we can also formulate any shade you would like on the basis of CORONA®-HGA 5028.

Special properties

- The term „low-hexanal“ means that a total of less than 1 mg of short-chain aldehydes is produced from 1 m² of printed surface. (Please contact us if you would like a description of the measuring method used.) In the case of conventional, oxidative-drying sheet-fed offset inks, this value is usually higher than 20 mg/m².
- The excellent results gained with this ink series in odour and taste tests can in part be put down to the fact that the ink film only dries and hardens by setting. Organoleptic assessment produces excellent results („Robinson tests“ EN 1230 Part 1 and Part 2).
- Due to this drying mechanism, CORONA®-HGA inks do not offer adequate rub resistance. As a result, packaging must be finished with an organoleptically neutral, water-based coating, which can be applied either wet-on-wet or wet-on-dry.
- CORONA®-HGA inks can be used in a similar way to conventional inks and are suitable for use in all sheet-fed offset presses and on all stocks.
- If the substrate or primary packaging used to make the packaging does not act as an adequate barrier, there is a possibility of substances migrating from the packaging to its contents. In this case, we recommend you use our **MGA-CORONA® 5045** sheet-fed offset series (low-migration, organoleptically neutral).

Application instructions

Fount solution delivery and composition

It is best to keep the dampener setting low, particularly when ink coverage is low. The isopropanol concentration in the fount solution must not exceed 10 %, with a pH of 5.0 – 5.4.

Roller treatment / Washup

Due to the possible negative effect on printed packages with respect to odour and taste, the rollers must not be sprayed with Anti-drier or Farbfit. After washing the rollers, leave them to dry well.

Water-based coating delivery

To obtain an optimum print result, we recommend that you use, for example, our water-based coating **ACRYLAC® High Gloss 57 0010/40**.

We recommend that you set the coating application rate to the upper limit, in order to obtain an uninterrupted film over the inks. In this way, you optimise rub resistance and gloss.

Format setting

The area coated should end approx. 5 mm from the edge of the paper on all sides.

Printing auxiliaries

To reduce the tack of the ink, use our low-odour **Paste Reducer 10 T 0550**.

To tone down or brighten the colour, use our low-odour **Transparent White 50 0501/58**.

Please do not use any other printing auxiliaries.

Under no circumstances should you add siccatives of any kind in an attempt to prevent the build-up of organoleptically active substances.

Ink mixtures

CORONA®-HGA inks may only be mixed with inks of the same type.

Classification

Safety Data Sheet available on request.

How supplied

Printing ink

2.5-kg vacuum-sealed cans
Special containers on request

Water-based coating

25-kg plastic canisters
600-kg IBC (intermediate bulk container)

Contact addresses for advice and further information can be found under www.hubergroup.de

This Technical Information sheet reflects the current state of our knowledge. It is designed to inform and advise. We assume no liability for correctness. Modifications may be made in the interest of technical improvement.