



## HYDRO<sup>®</sup>-BASE GA and HYDRO<sup>®</sup>-XTND GA



**Water-based printing inks for paper and carton-board packaging  
Standard flexographic printing of absorbent substrates  
Extenders and high-intensity pigment concentrates**

### Description

A wide range of pigment concentrates suited for mixing all HYDRO-X ink series in combination with HYDRO-XTND GA extenders. HYDRO-BASE GA is ideal for use in In-House mixing stations.

### Applications

HYDRO-BASE GA is designed to formulate inks complying with a wide range of market requirements for absorbent substrates in terms of fastness properties and pigmentation level. It is a central part of the modular and highly versatile HYDRO-X GA system which gives you the flexibility to respond on a case by case basis to specific requirements of your customer.

<b>Substrates</b>	Un-coated paper	Coated paper	Re-cycled paper	Carton board	Corrugated board
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### Properties

HYDRO-BASE GA is composed of a large range of colour indices. For the whole list of pigment concentrates please refer to the table on page four of this Technical information.

For HYDRO-XTND GA extender properties please refer to the table on page three of this Technical information.

### Formulating inks with HYDRO BASE GA and HYDRO XTND GA

Inks within the HYDRO-X GA system are formulated out of the appropriate HYDRO-BASE GA products and the HYDRO-XTND GA extenders. In order to achieve the right ink properties it is essential to respect the maximum ratio between HYDRO-BASE GA and the HYDRO-XTND GA. The right colour strength is obtained by adding the appropriate amounts of extender.

HYDRO-BASE GA	HYDRO-XTND GA
max. 70 %	min. 30 %
min. 0 %	max. 100 %

### Print process

Flexographic central impression or stack presses with either chambered doctor-blades or twin ink roller configurations applying ink to either photopolymer or rubber plates.

## Print viscosity and dilution

<b>Diluents</b>	Flexographic printing 18 - 25 sec. DIN 4 mm	Remarks
<b>Standard</b>	Water	
<b>Retarder</b>	HYDRO-X GA Retarder	max. 5 - 6 %

## Use in Dispenser

HYDRO-BASE GA concentrates are ideal for use in a dispenser. Due to different properties of the pigments used it is essential to define the appropriate dispenser configuration in terms of pumps, piping etc. Please contact your local service centre for further details.

## Auxiliaries

<b>Cleaning agent</b>	Cleaning agent 10T0145	See separate Technical information
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For additional auxiliaries, please refer to separate technical data sheet.

## Storage and Shelf life

Products of HYDRO-BASE GA and HYDRO-XTND GA series should be stored under cool and dry frost-free conditions within a temperature range of 5 °C to 25 °C. When stored and unopened in the original packaging, the product has a shelf life of 6 months. If the original packaging has been opened, the ink should be thoroughly mixed and tested for quality, viscosity and any sedimentation prior to printing. Fanal pigmented inks (see labelling) have a shorter shelf life.

## Health & Safety

The material safety data sheets contain all relevant information for the generation of appropriate internal plant instructions. The user is responsible for all local legislation requirements.

## Ink Handling

Please refer to General Guidelines for handling inks for flexible packaging.

## Instructions for the use of printing inks for the production of primary food packaging

The inks are recommended for the manufacture of food packaging made of paper and board for dry foodstuffs, or for dry and fatty foodstuffs. They are formulated and manufactured such that they will in principle allow compliance of the final printed product with Regulation (EC) No 1935/2004, provided that the inks are used in accordance with the information given in this technical data sheet and correctly processed, and provided that the food packaging is designed in a way that there is no intended direct food contact with the print.

The manufacturer of the finished article and the filler have the legal responsibility to prove by appropriate migration testing that it is fit for its intended purpose.

Information on substances used or known to be present with the potential to migrate, including possible restrictions, is provided in the respective „Statement of Composition“, to allow members of the packaging chain to assess compliance of the printed packaging with the Framework Regulation (EC) No 1935/2004 and/or Swiss Ordinance 817.023.21.

It has been shown by indicative migration testing with printed samples made from fresh fibre board (220 g/m<sup>2</sup>), printed weight 6 g/m<sup>2</sup> (wet), with Tenax® as the food simulant for 10 days at 40 °C, that it is possible to produce primary food packaging where any transfer of substances from the ink layer to the packed dry and fatty/non fatty foodstuff by migration or set-off is below applicable limits.

The printer must ensure sufficient drying of the inks, especially when retarders have been added.

The inks are not recommended for printing tissues, paper bags for bakery products, and paper plates.

There are restrictions for the use of printing inks for applications where temperatures above 120 °C are applied for extended periods of time.

## HYDRO-XTND GA extender properties

Product name	HYDRO-GLOSS GA	HYDRO-GLOSS HD GA	HYDRO-SPEED GA	HYDRO-POWER GA	HYDRO-POWER COF GA
Description	Standard gloss extender	Slow-drying gloss extender	Fast drying gloss extender	Standard matt extender	Anti slip matt extender
Ink series	HYDRO-WELL HYDRO-TOP HYDRO-BAG	HYDRO-WELL HYDRO-TOP HYDRO-BAG	HYDRO-WELL HYDRO-TOP HYDRO-BAG	HYDRO-WELL HYDRO-TOP HYDRO-BAG	HYDRO-WELL HYDRO-TOP HYDRO-BAG
Print designs	Halftone printing (incl. CMYK set) fulltone printing	Halftone printing (incl. CMYK set) fulltone printing	Halftone printing fulltone printing	Halftone printing (single colours) fulltone printing	Halftone printing (single colours) fulltone printing
Applications and substrates	Standard extender for coated paper and cartonboard	Standard extender for halftone printing on coated paper	Standard extender for in-line printing	Standard extender for corrugated board and uncoated paper	Standard extender for paper sacks
Drying speed	moderate	slow	fast	moderate	moderate
Rub resistance	high	high	high	moderate	low
Re-solubility / re-wettability	high	high	low	moderate	moderate
Coefficient of friction*	medium	medium	medium	medium	high
VOC-value (%)	< 0,3	< 0,3	< 3	< 0,3	< 0,3

For preprint applications preliminary lab tests are required to confirm adequate ink fastness properties for your specific conditions.

## HYDRO-BASE GA concentrate fastness properties

Sales code	Shade	C.I.	Light-fastness (full print)	Max. Temp.	Chlorine [%]	Copper [%]	Fastness properties								
							Ethanol	Solvent-Mixture	Alkali	Soap	Washing powder	Fat	Butter	H <sub>2</sub> SO <sub>4</sub>	Linseed oil
01HX0000Y1	Yellow, greenish	P.Y.1	6	180	0	0	5	2	5	5	5	4	4	5	4
01HX0000Y3	Yellow, greenish	P.Y.3	6	160	8,1	0	5	2	5	5	5	3	3	5	2
01HX0000Y13	Gelb, reddish	P.Y.13	4 - 5	200	4,1	0	5	5	5	5	5	5	5	5	5
01HX0000Y74	Yellow, greenish	P.Y.74	6	140	0	0	5	2	5	5	5	4 - 5	4	5	5
01HX0000O5	Orange	P.O.5	5 - 6	160	0	0	5	4	5	5	4 - 5	3	3	5	5
01HX0000O13	Orange	P.O.13	3	200	4,5	0	5	4	5	5	5	5	5	5	5
01HX0000O34	Orange	P.O.34	5	180	4,1	0	5	5	5	5	5	5	5	5	5
02HX0000R2	Red, yellowish	P.R.2	4 - 5	160	6,7	0	5	3	5	4	4	3	2	5	5
02HX0000R4	Red, yellowish	PR.4	4	140	4,5	0	5	2 - 3	5	5	5	3	2	5	5
02HX00R531	Red, yellowish	P.R.53:1	3	200	3,4	0	5	4 - 5	3	3	3	4	4	3	4 - 5
02HX00R571	Red, bluish	P.R.57:1	4 - 5	180	0	0	5	5	5	2	2	5	5	2	5
02HX00R812	Pink (Fanal)	P.R.81:2	3	180	0	0	3	2	2	1	2	5	5	3	5
02HX00R122	Red	P.R.122	6 - 7	200	0	0	5	5	5	5	5	5	5	5	5
02HX00R169	Pink (Fanal)	P.R.169	3	180	0	1,6	3	2	2	1	2	5	5	3	5
02HX00R170	Red	P.R.170	5 - 6	180	0	0	5	5	5	5	5	5	5	5	5
02HX00R184	Red	P.R.184	5 - 6	180	2,2	0	5	4 - 5	5	5	5	5	5	5	5
03HX0000B1	Blue (Fanal)	P.B.1	3	160	0	0	1	2	4	3 - 4	4	3 - 4	4	5	3
03HX00B153	Blue, greenish	P.B.15:3	7 - 8	220	0	4,6	5	5	5	5	5	5	5	5	5
03HX0000B61	Blue, reddish	P.B.61	3	160	0	0	3 - 4	3 - 4	5	5	5	5	5	5	5
03HX0000V3	Violet (Fanal)	P.V.3	3	160	0	0	3	2	4	4	3	3 - 4	3 - 4	4	4
03HX0000V23	Violet	P.V.23	6 - 7	220	4,2	0	5	5	5	5	5	5	5	5	5
03HX0000V27	Violet (Fanal)	P.V.27	3	160	0	2	1	3	2	1	1	2 - 3	3	4	2
04HX0000G7	Green	P.G.7	7 - 8	220	22,9	2,6	5	5	5	5	5	5	5	5	5
09HX0000BL7	Black	P.Bk.7	7 - 8	200	0	0	5	5	5	5	5	5	5	5	5
07HX0000WH6	White	P.Wh.6	7 - 8	200	0	0	5	5	5	5	5	5	5	5	5

Contact addresses for advice and further information can be found under [www.hubergroup.de](http://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.