

# Technical Data Sheet

Issue: July 2018

## Product name

AQUALABEL HC (high concentrated)

## 1. Description / Application areas

Aqualabel HC is a transparent, water-dilutable ink, specially developed for label printing and is suitable for flexographic printing on coated and non-coated paper and cardboard. Furthermore offers Aqualabel an amazing adhesion on different synthetics.

## 2. Product safety

### Intended application

This ink series (this product) is intended for printing on NPH packaging applications (Nutrition), Pharma and Hygiene). Exceptions are the Fanal inks, which can be recognized from the word Fanal in the material name. Please also recognize the separate classification of the listed additives.

### Compliance with requirements

These inks are only suitable for use on the non-food-contact side of food packaging, provided that they are applied using the relevant Good Manufacturing Practices (a system for ensuring that products are consistently produced and controlled according to quality standards) and according to the guidelines in this Technical Data Sheet.

The printer, converter and the packer/filler each have a responsibility to ensure that the finished - printed - article is fit for the intended purpose(s) and that the ink and coating components do not migrate into the food at levels that exceed legal, regulatory and industry defined requirements.

Please refer to Siegwirk's "**Statement of Composition**" for further regulatory information.

In case of specific applications, please contact your technical application service.

For further information, please refer to **Siegwerk's Customer Guidance: Printing Inks for Food Packaging ("Know How")** on

<https://www.siegwerk.com/en/our-responsibility/product-responsibility/customer-communications/food-packaging-safety.html>

Water-based products typically contain isothiazolinone biocides, including methyl isothiazolinone, as in-can preservatives. Such biocides may cause allergic skin reactions in already sensitized individuals.

## 3. Properties

Aqualabel HC inks are mono-pigmented, highly concentrated inks that have been specially developed for label printing.

Aqualabel HC inks are normally suitable for printing on thermo-paper without using an OPV.

Owing to the wide variety of thermos-printing materials, we always recommend checking the suitability in interaction with these printing inks when first processing a quality.

A further optimization of the heat resistance can be achieved by an admixture of 2% cross-linker and a reaction time of few days. We strictly recommend reading the safety data sheet for the curing agent. With a corresponding migration analyses, is this hardener useable for food packaging.

Another option to optimize the heat resistance is to overprint the inks with 15-002001-4 Overprintvarnish Thermo. This OPV is not recommended for food packaging.



Aqualabel HC inks have good adhesion on PET, PP, OPS, PVC and PE. Because there exist also a lot of different qualities we recommend checking the suitability in interaction with these printing inks when first processing a quality.

A further optimization of the adhesion can be achieved by an admixture around 5-10% of 15-015871-5 WB ADHESION PROMOTER.

Aqualabel HC inks can be printed with both rubber and photopolymer clichés.

To attain increased resistance to scratching and scuffing, we recommend over varnishing with UV-based or water-based overprinting varnish. Like the below named extender.

Aqualabel HC inks dry naturally. The drying speed depends on the absorption and evaporation of the thinners contained in the ink. The difference between the Aqualabel and Aqualabel HC inks is only based on different pigment concentrations.

#### 4. Instructions for printing and processing

Aqualabel HK inks can be diluted with water to printing viscosity. The optimum processing viscosity depends on the printing machine used.

Printing speed: 80 – 150m/min

Parameter		Spot Colors	Process Colors
Anilox	Lines/cm	160	240-320
	Volume cm <sup>3</sup> /m <sup>2</sup>	5-6	1,5 - 4

Retarder: 10-650022-6, addition 2 - 6 %. Usable for printing primary food packaging

Accelerator: Ethanol, addition 5 - 10 %. Only add while stirring, or use as a 1:1 mixture with water

Defoaming agent: 15-002328-1 addition 0.5 - 1 %. Dose carefully. Usable for printing primary food packaging

Refresher (to adjust the pH): 19-470138-9 Dose carefully. Usable for printing primary food packaging. Migration analyses necessary.

Resolubility Additive: 15-009927-3 5–22,8% Usable for printing primary food packaging. Migration analyses necessary.

When printing thermo-paper, we advise against admixing both accelerator and retarder, as this can cause discoloration of the paper.

As the viscosity depends greatly on the temperature, the ink must be temperate to processing temperature before dilution. We recommend processing the inks through the pump systems before setting the viscosity. The admixture of water must be accompanied by stirring, preferably not in the printing machine, in order to avoid pigment shock.



### **Cleaning**

Cleaner: 10-601187-7

The detergent 10-601187-7 is supplied in highly concentrated form. It may not be used in pure form for the washing process. We recommend a mixture of 1 part 10-601187-7 and 4 parts water. Rinsing with clear water is necessary immediately after the washing process. The detergent can be diluted to 1:10.

We recommend that the Anilox rollers undergo a thorough cleaning with ultrasound or a comparable process from time to time.

### **Storage and shelf life**

Keep away from freezing temperature.

The shelf life of this ink series is 12 months in unopened containers and a storage between 20°C and 35°C.





HR = High resistant

Material name	Material number	Light-fastness		Resistance					
		FT	HT	Alcohol	Alkali / Soap	Fat	Acid	Parafin	Water
Aqualabel Processcyan HC / HR	10-112048-3	8	7	5	5	5	5	5	5
Aqualabel Blue 072 HC / HR	11-112014-3	7	6	5	5	5	5	5	5
Aqualabel Reflexblue HC / HR	11-123763-2	7	6	5	5	5	5	5	5
Aqualabel Violet HC / HR	11-103363-5	7	6	5	5	5	5	5	5
Aqualabel Purple HC / HR	11-103383-3	7	6	5	5	5	5	5	5
Aqualabel Rhodaminered HC/HR	11-815628-0	7	6	5	5	5	5	5	5
Aqualabel Red 032 HC / HR	11-815657-9	6	5	5	4-5	3	5	3	5
Aqualabel Warmred HC / HR	11-803012-1	6	5	5	4-5	3	5	3	5
Aqualabel Orange HC / HR	11-707495-5	6	5	5	4-5	3	5	3	5
Aqualabel Yellow HC / HR	10-301408-0	6	5	5	4-5	3	5	3	5
Aqualabel Green HC / HR	11-501010-0	8	7	5	5	5	5	5	5
Aqualabel Processblack HC / HR	11-900942-1	8	7	5	5	5	5	5	5

**Note:** The data contained in this technical data sheet corresponds to our current level of knowledge. It does not represent any guarantee in a legal sense. Due to different types of substrate and working conditions, this information sheet can provide non-binding advice only. Before beginning a printing job, the printer should conduct suitable tests to ascertain whether the product can be used for the intended purpose.

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