



AquaCell® SG

Water-based Screen Printing Ink

Area of Application

Fast drying, water-based screen printing ink for printing on paper, cardboard and wood. To be used for indoor and short term outdoor applications.

Characteristics

- Good screen opening, even when printing fine details
- Good re-solubility
- Good blocking resistance
- Energy saving due to low drying temperatures
- High printed speed
- VOCs less than 2 %

Finish

Satin gloss

Farbtöne

Basic Colors for the AquaCell® GL Matching System	093 Colorless	364 Red Dark	566 Blue Transparent
	160 Yellow Light	467 Pink Transparent	669 Green Transparent
	161 Yellow Dark	472 Violet	945 White
	362 Red Light	473 Pink Transparent	948 Black
Standard Colors	944 White Opaque		
Special Colors	777 Silver* ¹	878/013 Brillant Gold* ¹	
Process Inks	156 Process Yellow	558 Process Cyan	099 Process Paste
	357 Process Magenta	949 Process Black	
Pigment Concentrates	L69910 Yellow	L69912 Cyan	L69913 Black
	L69911 Magenta		

Thinning

1 % Defoamer 9331 and 10 % water

or

1 % Defoamer 9331 and 15 – 20 % Retarder L47716

The defoamer is effective for approx. 3 days, then new defoamer has to be added

Crosslinking

The alkali and solvent resistance can be improved by adding **1 % Crosslinker WB 001**. The pot life is approx. 8 hours. After this time, used ink can be mixed with fresh ink in a ratio of 1 : 1, plus defoamer and crosslinker (each 1 %); extra water as needed.

In addition, please refer to our technical leaflet "Printing with Water-Based Screen Printing Inks" which may be downloaded from our website www.proell.de, click Downloads ⇒ Water-Based Screen Printing Inks ⇒ Printing with Water-Based Screen Printing Inks.

*¹ = Not in Stock, manufactured on request.

Fabric

PES-fabrics of 100 – 180 threads/cm (250 – 450 threads/inch) are suitable. When printing posters with process inks (paper weight of 130 – 150 g/m²) excellent results are achieved using polyester fabrics of 150 threads/cm (375 threads/inch).

The finer the mesh, the minor the ink deposit and the minor the fluting of the paper. In special cases, e. g. printing White Opaque, a coarser mesh can be used.

Stencil

Water resistant emulsions must be used. Excellent results during long production runs are achieved by using Pröll Diazo-UV-Polymer Emulsion Norikop 10 HQ. Sufficient drying of the emulsion is essential, residual moisture before exposure reduces print run resistance. The exposure time should be as long as possible.

Directions for Processing and Drying

The humidity in the printing room should be at least 50 %, ideal conditions would be 60 – 70 %.

During long printing runs, an increase in viscosity caused by evaporation of water can be adjusted by the addition of water. Moreover during short printing stops, it is recommended to spray the screen surface with water.

During printing stops do not flood the stencil with ink. Before restarting to print, either wash with Aqua-Jet® Liquid Cleaner L47603 or flood the stencil with fresh ink, let it take effect for two minutes and restart to print after some misprints.

Depending on the printing motif, papers starting from approx. 130 g/m² can be used. In general, drying equipment with a good air exchange and relatively low temperatures gives better results than dryers working with small amounts of air at high temperatures.

Printing on both sides of the substrate and stacking is not recommended.

Cleaning of Screens and Utensils

Screens and utensils can be cleaned with Aqua-Jet® Liquid Cleaner L47603 or Cleaning Concentrate 6953 (see Technical Information "Cleaning Concentrate 6953").

The screens may be cleaned in automatic screen washing and cleaning devices by using suitable cleaning agents.

For manual cleaning, the following advice is important:

- The non-squeegee-area should be kept as small as possible, e. g. confine the ink to the squeegee-area by using dams.
- The unused ink on both sides of the squeegee should be returned into the printing area from time to time.
- The unused ink on the screen should be protected from drying and hardening by spraying with water.

When manually cleaning Aqua-Jet® Liquid Cleaner L47603 or Cleaning Concentrate 6953 can be used. The above mentioned cleaners should be sprayed onto the stencil and spread with a brush. After soaking for 2 to 3 minutes, rinse with a high-pressure water sprayer.

Avoid eye and skin contact with alkaline cleaners, use personal protective equipment (e. g. gloves and glasses).

Auxiliaries

Defoamer 9331

Add 1 % to ink before printing, stir thoroughly

Retarder L47716

Works like a retarder paste that is the viscosity of the ink is not dramatically decreased. Add approximately 15 – 20 %.

Aqua-Jet® Liquid Cleaner L47603

Cleaner with low content of solvents but good cleaning power.

Cleaning Concentrate 6953

Solvent free universal cleaner, can be diluted with water (see Technical Information).

Shelf Life

The shelf life stated on the label assures the ink's quality and refers to unopened original cans stored in a dry place at temperatures between 5 °C (40 °F) and 25 °C (75 °F).

Important

Allow the ink as well as all the auxiliaries to be added to adjust to ambient temperature in the closed container before use.

Printing results, to a large extent, depend on the substrate as well as the printing and application conditions. We recommend checking your printing materials under your conditions of use prior to any production runs. Materials that are supposed to be identical may vary from manufacturer to manufacturer and even from batch to batch. Some substrates may have been treated with or can contain sliding agents, antistatics or other additives which will impair the adhesion of the inks.

In general please refer to our technical leaflet "General Information on Screen Printing Inks" which may be downloaded from our website www.proell.de, click Downloads ⇒ Water-Based Screen Printing Inks.

Disposal

Before pouring waste into the sewage, it should be pretreated according to state-of-the-art technology.

Safety precautions – General indications:

When working with chemicals, the usual safety precautions are to be observed. These are besides the rules of the Accident Prevention & Insurance Associations a good ventilation of the work place as well as good skin care and protection.

This is a test product which is still in development. For this reason, no assurances are currently given as to type conformity, processability or long-term performance characteristics. Therefore, the customer uses the product entirely at their own risk with no guarantee.

Before starting a production run, it is necessary to test samples of each newly designed part systematically with regard to the specifications for the intended use (e.g. climatic chamber, resistance, etc.).

The information contained in the technical information/instruction sheets or other product information sheets is based on product testing conducted by Pröll. Because printing and environmental factors critically affect each individual ink application, the above mentioned information and instructions represent only general recommendations concerning product characteristics and directions for use and should not be construed as representing express warranties regarding the product. The information and instructions in no way release the purchaser from his obligation to verify and test the inks and their application for the specific request, regarding: product characteristics, weather resistance, mixing proportions, gloss, thinning, special mixtures, printability, drying speed, cleaning, effects on or of other materials to be contacted and safety precautions. All details contained in the instruction sheet "General Information on Screen Printing Inks" are to be considered. The further manufacture and use of products containing our inks by the purchaser takes place beyond our control, and the responsibility for further application and use of our product resides solely with the purchaser. Pröll disclaims any warranties, express or implied.

This information supersedes all previous technical information.