AquaCell® GL
Water-based Screen Printing Ink

**Area of Application**
Fast drying, water-based screen printing ink to print on paper, cardboard and wood. To be used for indoor and short term outdoor exposition.

**Characteristics**
- Good screen opening, even when printing fine details
- Good self solvency
- Good blocking resistance
- Energy saving due to low dryer temperature
- High printed speed
- VOCs reduced to approx. 2 – 3 %

**Finish**
Satin gloss

**Color Shades**

<table>
<thead>
<tr>
<th>Basic Colors for the AquaCell® GL Matching System</th>
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</thead>
<tbody>
<tr>
<td>093 Colorless</td>
</tr>
<tr>
<td>364 Red Dark</td>
</tr>
<tr>
<td>566 Blue Transparent</td>
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<td></td>
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<table>
<thead>
<tr>
<th>Standard Colors</th>
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<tbody>
<tr>
<td>944 White Opaque</td>
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<table>
<thead>
<tr>
<th>Special Colors</th>
</tr>
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<tbody>
<tr>
<td>777 Silver*¹</td>
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<tr>
<td>878/013 Brillant Gold*¹</td>
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<table>
<thead>
<tr>
<th>Process Inks</th>
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</thead>
<tbody>
<tr>
<td>156 Process Yellow</td>
</tr>
<tr>
<td>357 Process Magenta</td>
</tr>
<tr>
<td>558 Process Cyan</td>
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<tr>
<td>949 Process Black</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Pigment Concentrates</th>
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<tbody>
<tr>
<td>L 37486 Yellow</td>
</tr>
<tr>
<td>L 37487 Magenta</td>
</tr>
<tr>
<td>L 37488 Cyan</td>
</tr>
<tr>
<td>L 37489 Black</td>
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**Thinning**
1 % Defoamer L 54131 and 10 % water
or
1 % Defoamer L 54131 and 15 – 20 % Retarder L 47716
The defoamer is effective for approx. 3 days, then new defoamer should 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 up with fresh ink in a ratio of 1 : 1, if required together with defoamer and crosslinker (each 1 %); addition of 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.
**AquaCell® GL**

**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

During printing stops do not flood the stencil with ink. Before restarting to print, either wash with Aqua-Jet® Liquid Cleaner L 47603 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 up from circa 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 L 47603 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 L 47603 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 L 54131**

Add 1 % to ink before printing, stir thoroughly.

**Retarder L 47716**

Works like a retarder paste that is the viscosity of the ink is not dramatically decreased.

Add approximately 15 – 20 %.

**Aqua-Jet® Liquid Cleaner L 47603**

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).
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**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 room 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](http://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.