



# Aqua-Jet® KF

Water-based Screen Printing Ink  
Free of N-Methyl-2-Pyrrolidon (NMP)

## Area of Application and General Characteristics

**Water-based screen printing ink for hard printing substrates such as polycarbonate, acrylic, rigid PVC, polystyrene (see auxiliaries, Crosslinker WB 001), ABS, pre-treated polyester and pre-treated polyolefines after testing.**

## Finish

Basic colors have a gloss finish. If necessary, a matt finish can be obtained by adding 1 – 2 % Matting Agent 2009.

## Color Shades

<b>Basic Colors</b>	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
<b>Process Inks</b>	156 Process Yellow* <sup>1</sup>	558 Process Cyan* <sup>1</sup>	099 Process Paste* <sup>1</sup>
	357 Process Magenta* <sup>1</sup>	949 Process Black* <sup>1</sup>	

## Printing

1 % Defoamer L36273 should be added prior to printing. This agent must be stirred well to ensure good leveling of the printed film. The humidity in the printing room should be at least 50 %, ideal conditions would be 60 – 70 %.

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](http://www.proell.de), click Downloads ⇒ Water-Based Screen Printing Inks ⇒ Printing with Water-Based Screen Printing Inks.

## Thinning

The ink must be thinned with approximately 5 – 10 % water.  
It is also possible to add up to 20 % Retarder L47716 instead of water.

## Fabric

All usual screen printing fabrics and mesh counts are suitable.

## 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.

\*<sup>1</sup> = Not in Stock, manufactured on request.

## Drying

The drying time depends on the substrate, drying equipment, and especially climatic conditions such as humidity, temperature etc.

Adhesion, scratch resistance, and final hardness of the ink film are only achieved after complete evaporation of the water (or retarder) contained in the printed ink film.

## Other Directions for Processing

Before printing it is recommended to moisten the stencil on the squeegee side, so even very fine details can be printed.

During short printing stops (up to 5 minutes) the screen must be flooded with an ink layer of approx. 2 – 3 mm.

Prior to longer printing stoppage, the screen should be wiped and cleaned. When printing again, the screen has to be remoistened.

## Overprinting

Overprinting with Aqua-Jet® KF 093 Colorless.

A gloss finish can be achieved using Overprint Lacquer L67469.

## Crosslinking

2 % of Crosslinker WB 001 should be added to increase blocking and abrasion resistance of the ink film and the resistance to water and cleaning agents.

Attention: The crosslinker may impair the adhesion on polystyrene. Testing is necessary.

## Cleaning of Screens and Utensils

Inks remaining on stencils and utensils should be removed as soon as possible. Spray ink covered equipment with water or liquid cleaner to avoid complete drying. 2 or 3 minutes after application of the cleaner the stencil can be washed, using a high pressure cleaner if possible.

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

## Auxiliaries

### Defoamer L36273

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 %.

### Crosslinker WB 001

Addition of 2 % improves blocking and abrasion resistance as well as resistance against water and cleaning agents.

Adhesion can be improved. On Polystyrene testing is necessary.

### Aqua-Jet® Liquid Cleaner L47603

Cleaner with low content of solvents but good cleaning power for undried inks.

### Cleaning Concentrate 6953

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

### Cleaner 6614

Solvent based cleaner for ink residues dried into the mesh. The mesh should be dry before application.

## 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](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.

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.