



Aqua-Jet® FGL

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

Area of Application and General Characteristics

Water-based screen printing ink for printing on plastics like PVC, VC-copolymers and poly-carbonate. Paper, cardboard (with a density up to 150 g/m²), as well as wood are also printable substrates. Further applications include, certain non-flexible textile materials and plastic-coated fabrics.

Aqua-Jet® FGL is not recommended for decoration of tarpaulins used for trucks.

Weather Resistance

Aqua-Jet® FGL provides very good light-fastness and weather resistance.

Finish

Gloss to satin gloss

Color Shades

Basic Colors for the Aqua-Jet® FGL Matching System	093	Colorless	218	Red Orange	472	Violet
	102	Citron	312	Red	566	Blue Transparent
	104	Yellow	368	Red Transparent	669	Green Transparent
	207	Orange	429	Red Violet	945	White
	215	Orange Medium	467	Pink Transparent	948	Black
Standard Colors	103	Yellow Light	519	Turquoise	625	Green Light
	134	Ochre	520	Ultra Blue	630	Green Medium
	208	Orange	521	Blue Medium	836	Brown
	309	Red Light	522	Marine Blue	944	White Opaque
	316	Maroon	624	Green Loud		
Process Inks	156	Process Yellow	558	Process Cyan	099	Process Paste
	357	Process Magenta	949	Process Black		
Special Colors	777	Silver	878	Gold	878/042	Solar Gold
Fluorescent Inks	180	Fluo Yellow	285	Fluo Red Orange	481	Fluo Pink
	284	Fluo Orange Yellow	386	Fluo Red	683	Fluo Green

Fluorescent Inks must be printed on a white background.

Due to the limited light fastness of the pigments contained fluorescent inks, these inks are not weather resistant.

Not even several coats of overprint varnish will noticeably improve the color stability of fluorescent inks.

Matting

Aqua-Jet® FGL Matt Paste 098: addition of approx. 15 – 20 %
or
Matting Agent 2009: addition of approx. 1 – 5 %
depending on the desired matting level.
Matted ink films are not as weather resistant as original color shades.

Printing

1 % Defoamer L 54131 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, click Downloads ⇒ Water-Based Screen Printing Inks ⇒ Printing with Water-Based Screen Printing Inks.

Thinning

Aqua-Jet® FGL should be thinned with approx. 10 % 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.

Drying

The drying time depends on the substrate, thickness of the stencil and climatic conditions such as humidity, temperature etc. Tunnel dryers with a good convection will improve the drying procedure (when printing several ink layers the drying time will be increased).

Adhesion, scratch resistance and final hardness of the ink film are only achieved after complete evaporation of the water after about three days.

Double sided printing, when ink comes in contact with ink, is not recommended.

Other Directions for Processing

During printing stops, the screen must be flooded with an ink layer of approx. 2 – 3 mm. The squeegee must apply a sufficient ink quantity onto the screen to avoid drying in.

Moreover during short printing stops, it is recommended to spray the screen surface with Aqua-Jet® Screen Opener to avoid drying of the ink in the screen.

Prior to longer printing stops, the screen must be washed free of ink with Aqua-Jet® Liquid Cleaner.

The resistance to aggressive media, different solvents, alcohol and fuels, including premium-grade gasoline, can be improved by adding 2 % Crosslinker WB 001. By adding the crosslinker, the washability of the ink films on textiles is also increased. Such prints can withstand machine washing with water temperatures up to 95 °C/203 °F and may also be dry-cleaned.

The pot life for the mixture of ink and crosslinker is 8 hours.

Overlacquering

Overprint Varnish Aqua-Jet® FGL 093 is recommended for overlacquering.

2 % Crosslinker WB 001 should be added to increase blocking and abrasion resistance.

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 L 54131

Add 1 % to ink before printing, stir thoroughly.

Retarder Aqua-Jet® VZ 100

Add a max. of 5 % additional to water (5 – 10 %) used for thinning.

Retarder Aqua-Jet® VZ 100 reduces ink drying in the screen but decreases the possibility to stack the prints.

Retarder L 47716

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.

Aqua-Jet® Liquid Cleaner L 47603

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 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, 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.