



Aqua-Jet® WT

Water-based Screen Printing Ink

Area of Application and General Characteristics

Water-based screen printing ink for printing on wood and plastics (only after pretests!) for indoor application, especially for toys.

The ink line is free of the solvent N-Methyl-2-Pyrrolidon (NMP) and free of Organotin Compounds.

Light Fastness

Aqua-Jet® WT provides very good light-fastness, except the fluorescent inks.

Finish

Basic colors have a satin gloss finish.

Color Shades

Basic Colors	093 Colourless	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	944 White Opaque
			948 Black

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 in fluorescent inks, prints should not be exposed to direct sun light.

The Aqua-Jet® WT basic colors have been tested according to the toy standard (DIN EN 71, part 3:2013). The results measured (TÜV Rheinland LGA Products GmbH) were significantly lower than the given limits (migration of certain elements, category 3).

Matting

Matting Agent 2009: addition of approx. 1 – 5 %, depending on the desired matting level.

Printing

1 % Defoamer L 36273 has to be added before printing. This agent must be stirred in 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 %.

The substrate has to be clean, free of dust, grease and soil of any kind.

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® WT has to be thinned with water, 5 % to 10 % are recommended. Alternatively, Retarder L 47716 (free of solvents) can be added up to 20 %.

Fabric

Screen printing fabrics from 77-48 threads/cm (195-48 threads/inch) to 120-34 threads/cm (305-34 threads/inch) are suited.

Stencil

Good results during long production runs are achieved by using Pröll Diazo-UV-Polymer Emulsion Norikop 10 HQ. After the main coating we recommend two further coatings from the squeegee side with a drying step after each coating. 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 is not recommended, when ink comes in contact with ink.

Overlacquering

Overprint Varnish Aqua-Jet® WT 093 is recommended for recoating. Glossy overprint varnish is Aqua-Jet® WT L 65783.

Cleaning of Screens and Utensils

Residual inks 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 36273

Add 1 % to ink if necessary, stir thoroughly.

Retarder L 47716

Solvent free retarder, addition up to 20 % without decreasing viscosity too much.

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.

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.