Preliminary Technical Information
7/2026

Test Product

Aqua-Jet® WBI N

Water-based Screen Printing Ink

Area of Application and General Characteristics

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

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

Finish

Gloss to satin gloss

Color Shades

Basic Colors for the Aqua-Jet® WBI N 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	

Matting

Aqua-Jet® WBI N 098 Matt Paste: 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 L71872 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® WBI N should be thinned with approx. 5 % 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 11. 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 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 1 – 2 % Crosslinker WB 001.

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

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 L71872
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 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 1 – 2 % improves blocking and abrasion resistance as well as resistance against water and cleaning agents.

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).

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.).