

RADIANT® AQUABEST™

WATER SOLUBLE FLUORESCENT TONERS

Aquabest represents a new, unique fluorescent color ink system which, although delivered in dry form, is totally water soluble. With the addition of a small amount of ammonia and alcohol, but without other binder additives, a complete water ink system for flexographic and/or gravure inks can be formulated with incredible ease.

Water-based inks made from **Aquabest** exhibit excellent film forming properties, color strength and high gloss. Lightfastness is superior to most solvent-based fluorescent flexographic and gravure inks. It exhibits excellent transparency making it the system of choice for printing on foil and film. This also makes it ideally suited for highlighter inks in felt tip markers. Because of these unique properties, **Aquabest** gives the ink maker an unexcelled flexibility, quality and value when formulating fluorescent water inks.

Typical 30% Solids **Aquabest** Ink Formula Percentage by weight

Water	25 parts
Isopropanol	16 parts
Ammonium Hydroxide (28 Bé)	4 parts
Aquabest Toner (Dry)	30 parts
Water	25 parts
Total	100 parts

Typical **Aquabest** Water Based Felt Tip Marker Ink

Aquabest Ink Above (30% solid)	40 parts
Ethylene Glycol or PEG 200	30 parts
Water	30 parts

Mix well and adjust solvents to the desired rate of drying.

PROCEDURES

It is important that these instructions for preparing a 400 gram sample are followed precisely. They have been tested to minimize the color shift and/or viscosity changes that are typically encountered in water-based ink systems.

Step 1. Prepare mixture as follows:

Water	100g
Isopropanol	64g
Ammonium Hydroxide (28 Bé)*	<u>16g</u>
	180g

Premix above liquids in covered container.

* Prior to use, be certain that ammonia solution is at 28 Bé. An equivalent amount of triethanolamine, aminomethylpropanol or some other less volatile amine may be substituted for ammonia.

Step 2. Prepare 40% solids ink concentrate as follows:

- Using a covered high-speed disperser with Cowles type blade, slowly add 120g **Aquabest** (adding too quickly may form lumps). While attempting to keep temperature below 100°F, mix until a clear solution is obtained. This will require approximately 15 - 20 minutes of mixing depending upon the dispersing equipment used. If the solution remains cloudy, an addition of up to 1.5 grams of Ammonium Hydroxide (28 Bé) can be added to improve clarity.
- Check pH and adjust to 7.0 - 7.5. If pH is too low, increase with Ammonium Hydroxide (28 Bé). If pH is overshot, adjust with a weak solution of acid like 1 % phosphoric acid in water.
- Make certain that any pH adjuster added to the 40% solids concentrate is mixed in long enough to avoid any localized concentration of it so as to ensure proper measurement.

*Caution: If inks are not finished in the proper pH range (7.0 - 7.5), color shift or an unstable solution may result.

Step 3. Finish **Aquabest** ink by adding the balance of water (approximately 100 grams) to the above concentrate bringing the total to 400 grams. This will produce a 30% solids ink. It is recommended that **Aquabest** ink be prepared for immediate use.

STORAGE

Dry **Aquabest** toner should be stored in a sealed container, away from heat and humidity.