

safer etchant recipes

ALUMINIUM PLATE ETCHING

1. 1 kg copper sulphate
2. 250 grams sodium chloride (table salt) Note: 1 kilo of salt will give you a more aggressive etch.
3. 25 grams sodium bisulphate (toilet cleaner or pool cleaner)
4. 10-20 litres water - depending on bath strength required

ZINC PLATE ETCHING

Note: This recipe comes from Ad Stijnman. Zinc may also be etched using the same recipe as an aluminium etch.

1. **Deep etch and relief etch:**
200 grams of copper sulphate to 1 litre of water.
2. **Normal line etching:**
100 grams of copper sulphate to 1 litre of water.
3. **Fine line, coarse aquatint, soft ground:**
50 grams of copper sulphate to 1 litre of water.
4. **Fine aquatint:**
25 grams of copper sulphate to 1 litre of water.

The stronger the solution the faster it etches

COPPER PLATE ETCHING

Note: The recipe below is from Friedhard Kiekeben.

Saturated, ready to use ferric chloride solution is available from printmaking supply stores in Australia & Warringham Printmakers Studio usually purchases ready mixed ferric chloride from Melbourne Etching Supplies.

1. Basic stock etching solution:
2 parts water to 1-part ferric chloride solution (solution strength of 42† Baume).
2. Further treatment to *condition* the solution:
10 cc of the stock solution added 10 cc of 9% household ammonia solution. The resulting sludge of ferric hydroxide is allowed to settle before pouring off the liquid and adding the precipitate to 1 litre of the stock solution. Or, once an etching cycle using ferric chloride has been initiated add spent ferric chloride liquor (containing ferric hydroxide) to the new stock 42† Baume solution, in the proportion 1 part spent liquor to 10 parts 42† Baume solution.
3. A 42† Baume solution is very good for a deep line bite.
When diluted to approximately 32† Baume by the addition of an equal part of water, it becomes very effective for soft ground and delicate work without a noticeable loss of biting time, and reduces foul biting. Half an hour in stock solution for a black aquatint, and an hour for an average etched line.
Very deeply bitten lines may take several hours.

EDINBURGH ETCH

4 parts ferric chloride solution plus - part citric acid solution

Sample Quantity

1. 4 litres of ferric chloride solution
2. 1 litre hot water mixed with 300ml citric acid powder (ratio of 3:1)

To make up the Edinburgh Etch:

1. Pour the desired quantity of ferric chloride into a plastic container.
2. Make up the citric acid solution using the ratio of 3 parts water to 1-part powder.
3. Mix citric acid powder into hot water stirring continuously. When completely dissolved, slowly add to the ferric chloride solution. Keep stirring until you have produced a uniform liquid.