

Recipes for Saline Sulphate Solution

Since first discovering etching with a solution of copper sulphate and salt I have found various recipes for it. They are all very similar and each have been tested by their source. I personally favour the first (Keith Howard) but I have included the others for anyone who wishes to try the alternatives. In fact any mixture will work but beware of mixing up too concentrated a solution as the fizzy reaction that results can lead to a high level of vapour in the air. Although relatively safe, the solution is certainly not to be ingested or inhaled.

Recipes

1. Keith Howard

To etch zinc:

Copper sulphate crystals 75g
Salt 75g
Water 1 litre

To etch aluminium:

Copper sulphate crystals 70g
Salt 140g
Water 1 litre

2. Friedhard Kierkeban

To etch zinc, aluminium or mild steel:

Copper sulphate crystals 100g
Salt 100g
Water 1 litre

3. Peter Wray

To etch zinc or aluminium:

Copper sulphate crystals 1kg
Salt 1kg
Water 7 litres

4. Robert Adam and Carol Robertson (from Intaglio book)

To etch zinc or aluminium:

Copper sulphate crystals 500g
Salt 125g
Water 10 litres

Mixing

The instructions below apply to any of the above.

Always wear rubber gloves and a dust mask, especially when handling copper sulphate in its dry form.

To mix up a general use solution:

- Weigh out the salt and copper sulphate crystals.
- Fill a measuring jug with half the quantity of warm water.
- Add the dry ingredients and stir until fully dissolved.
- Add the rest of the water cold.

On average, 2 litres will usually be sufficient to etch 2 or 3 medium sized plates with line and aqua-tint.

For Fine lines or fine aquatint:

- Simply add more water to reduce the strength of the solution and prolong the length of the etch. Peter Wray suggests doubling the amount of water.

For spit bite:

- A concentrated solution can be made by gradually dissolving equal proportions of salt and copper sulphate in about 100 ml of warm water until saturation point (no more can be dissolved).