## **Cleaning Copper Parts Prior to Soldering**

Citric Acid will dissolve copper oxides but not all other contaminants.

**Try muriatic acid** (dilute hydrochloric acid) about 10% - *A cheap source is brick cleaner (£3.75 for 5L at Stermat)* - It will dissolve copper oxide (but not copper metal) so can be left soaking over night and it shifts most contaminants.

**Don't use on brass for more than 15 mins** as it eats the zinc, producing hydrogen gas.

Nb: use a wooden toothpick to get acid into the corners (the end fibres act like a micro brush).

Wash cleaned part with clean boiling water, & dry it in warm place.

## Safety Precautions When Working with Acids -

Be in well ventilated area.

Have a supply of clean running water.

Wear Face Shield (not goggles), Rubber Gloves, Rubber Apron (not your best clothes).

DO NOT SMOKE and always keep a solution of Bicarbonate of Soda to neutralise any spills.

## DON'T MIX DIFFERENT ACIDS unless you understand chemistry.

When diluting concentrated acid 'always add the acid to the water' to avoid the generation of excessive heat - a better way is to weigh out the appropriate amount of ice in a beaker and then add the Acid.

This is safer with no exothermic splashing as the ice has already dissipated a large amount of the heat being generated.