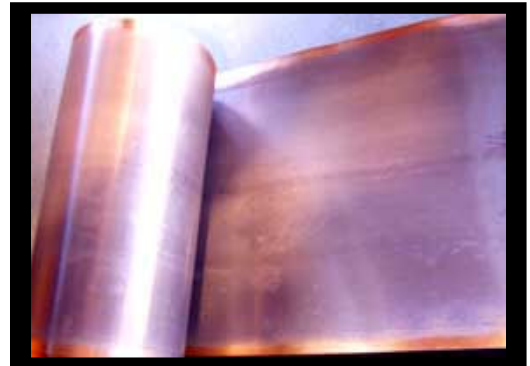


How to Patina Copper

The soft brushed finish of raw copper & brass will gain a rich natural patina with time. With weathering, the copper will first turn a rich red bronze color and eventually progress to a green or blue green/turquoise color.

This coloration is called 'patina' which is actually a thin layer of oxidation on the surface of the metal. The distinctive green color of aged copper is called 'verdigris'. The most famous example of this is the Statue of Liberty. Natural patinas acquired over time are deeper, richer and more durable color. Copper roofs may last many hundreds of years.

I) NEED: Thick Rubber Gloves and filtered breathing protection BEFORE beginning this finishing effect. Also, patina item only AFTER it has been completely crafted. Pre-patinaed metal will show shiny areas everywhere the metal is bent, hammered, or stretched. In addition, soldering will discolor the patina. Building the creation generally incorporates copper sheeting that is between 23 to 30 gauge thickness (.010 inch - .020 inch thickness).



II) Stand item up "vertically", so that gravity will allow the fluids to roll down naturally. Do not lie creation flat on ground as the fluids may pool up and not create a consistent effect.

III) Use a "throwaway" water squeeze bottle (.99 cent bottle of water from grocery store is perfect). Fill bottle with MURIATIC ACID (*industrial-strength solution of hydrogen chloride gas dissolved in water, also known as hydrochloric acid, purchased at any home-improvement store*). Squeeze the Muriatic Acid from the water bottle "SOAKING" the copper sheeting. Let the Muriatic Acid flow freely and "cascading down".

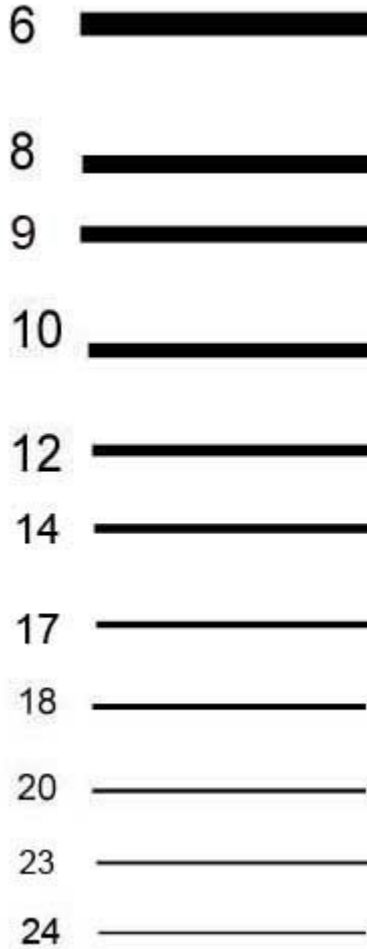
IV) Right away, and next using a disposable water spray bottle with nozzle control to "MIST" setting, saturate copper sheeting with BLEACH (*common household liquid variety*).

V) Let set for 30-120 seconds, depending on temperature and desired effect, then rinse off with water.

VI) Patina will take effect instantaneously and continue to patina for next several hours. If effect is not to liking, simply return to STEP III) and rinse copper sheeting again with MURIATIC ACID which will "erase" previous work and then mist over again with bleach!



GAUGE



GAUGE Charts for copper sheet & wire:

Gauge is thickness.

The higher the gauge number the thinner the metal.

This chart shows approximate gauge thickness for wire



Gauge	Dimension (inches)	Pounds per Sq. Foot in copper sheet approximately*
8	.128	5.12 (heavy copper plating over 1/4 inch thick)
12	.080	3.20
14	.064	2.56
16	.051	2.04
18	.040	1.60 (thick copper sheet called "plate" as in "plate steel")
20	.032	1.28
22	.025	1.18
23	.023	1.00 pound per square foot approximately (standard heavy weight for larger craft work, roofing and range hoods etc.)
24	.020	14.2 ounces per square foot .89 Pounds per square foot medium-heavy weight
26	.016	.64
30	0.01	.40 medium weight sheet twice as thick as 36 gauge
36	.005	.234 (heavy foil/ tooling foil)
38	0.002	.09
	0.0014	thin foil household foil- called heavy household foil
	0.0007	very thin foil - standard aluminum kitchen foil "tin foil"