

Materials and Equipment List for Zoom Workshop

Fred Ball Experimental Techniques Part 3: Foil and Mesh Structures

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Since this workshop is all about experimenting there will be a lot of options for students when using equipment and materials they already have or want to buy. This resource list contains a brief description of items students may already have, should plan to have or consider purchasing. More detailed resource information will be emailed to registrants 2-3 weeks before the workshop. Feel free to contact me if there are questions. Required supplies are highlighted in lt. grey. All else is optional. Please note that source links are only suggestions.

Materials

Metal - copper

minimum 12" x 12" piece of copper tooling foil (36 gauge) -other gauges can be used .
copper wire –a variety of gauges, especially thin gauges (24 to 30 gauge)
copper mesh, copper scrubbie
1 to 2 shallow copper dishes -3 to 4" diameter

Foils

(optional: gold, palladium and other precious metal leaf and foil)

Metal Working Tools

set of copper embossing tools and /or ceramic sculpting tools - https://www.amazon.com/Meuxan-Styluses-Painting-Modeling-Embossing/dp/B0761X588Y/ref=sr_1_1_sspa?dchild=1&keywords=clay+texture+tools&qid=1620431679&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUExSUY4Wjc3QkZIRjBBJmVuY3J5cHRIZElkPUewODkxNTYwN0xYMDFVMEwwRk01JmVuY3J5cHRIZEFkSWQ9QTA5MjI1NTU2SINWUE9aSzEwQ0kmd2lkZ2V0TmFtZT1zcF9hdGYmYWN0aW9uPWNsaWNrUmVkaXJlY3QmZG9Ob3Rmb2dDbGljaz10cnVl

Suggested tools to cut, bend, join and shape thin copper:

burnisher, rawhide or Delrin mallet, sheers and scissors for cutting copper foil, wire and mesh, tube wringer, scribes, pliers, hole punches, scrapbook texture tools, ruler for scoring.

Tweezers, Manicure scissors for cutting precious metal foils

Pickle for removing copper oxidation

Liquid Enamels

At least 3 liquid enamels are recommended: LCE2, 969 and 533 from Thompson

Note: (<https://www.e-namels.com/>) is offering a discounted kit for all of the Ball workshops

The kit consists of liquid enamels from both Thompson and WG Ball. Scott from e-enamels also has finer mesh sifters, copper dishes, and other tools and supplies that will be useful to have for the workshop.

The following Liquid Enamels manufactured by Thompson Enamels in dry powder form:
4oz quantities of 533 liquid Form white and 969 Base Coat Clear (<https://enamel-warehouse.com/product/4-oz-single-jar-powdered-liquid-form-enamel-all-colors-available/>)
(optional) 303, 1070, 771, 772 and any other Thompson liquid enamels
(optional) Liquid white and liquid clear enamels from W. G. Ball

Other Enamels

Any light colored Thompson lead free transparents including fluxes, especially 2020 “Crackle” base and low expansion enamels from Thompson: 1997, 2008, 1020, 1006
Thompson opaque foundation white 1030
(<https://thompsonenamel.com>)

Any other leaded or unleaded transparents and/or opaques including fluxes that come from other manufacturers. E-enamels.com carries WG Ball lead free enamels as well as Ball leaded enamels.

Misc.

small tube clear silicone adhesive
6” X 6” WOOD PANEL [THIS IS A SUGGESTION BUT A PIECE OF PLYWOOD WILL DO JUST AS WELL
<https://www.jerrysartarama.com/canvas-surfaces/panels/unprimed-and-hardboard-panels/da-vinci-pro-birch-wood-painting-panels>]

Application Tools

Sifters, 2 “ preferably, graded for 80, 100 and/or 150 mesh – mesh should be stainless steel
Brushes for applying liquid enamel
A mister or sprayer to spray water and diluted Klyrfire.
Water bottle
Small glass or plastic containers to mix liquid enamel, to add water, or to clean brushes
Petri dishes for precious metal foils and leaf
Palette knife,
Mixing palette –window glass, or white ceramic tile, or a small piece of whiteboard
Spoons or spatulas for stirring liquid enamel
Magazine paper for sifting enamel powder
(optional) mortar and pestle

General studio set-up

Firing

In this workshop we will be demonstrating experimentation using a kiln AND s torch. Many of Ball’s

projects use a torch so if you don't have a kiln and do have a torch firing set up, please feel free to do experiments using a torch. For kiln firing you will need:

standard firing and safety tools

if you have or can make stainless tools for firing dimensional objects that's great.

Timer, gloves, kiln glasses, tongs or large tweezers for removing hot pieces from firing tools, steel press plate

Drying

You may choose to air dry your test pieces or dry them on top of your kiln.

(optional) [heat gun and heat proof surface for drying enamel.](#)

Safety

Nitrile or latex gloves

Dust mask (preferably N95) or respirator

Kiln glasses, kiln gloves

Apron

Spraying

To spray Klyrfire or much thinned liquid enamel a Crown Sprayer Tool can be used: <https://www.amazon.com/Crown-Remanufacturing-Ozone-Friendly-Sprayer-Toolboxed/dp/B002M6Y1VY>

Ventilation

If spraying liquid enamel, a ventilated spray booth is a necessity to protect from overspray

A mask should be worn for all other application.