

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.

Materials

Metal - copper

minimum 12" x 12" piece of copper tooling foil ([36 gauge](#))
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

small strip of thick aluminum foil
(optional: [gold, palladium and other precious metal leaf and foil](#))

Metal Working Tools

Suggested tools to cut, bend and shape thin copper:
burnisher, rawhide mallet, Sheers for cutting copper foil, wire and mesh, tube wringer, scribes, pliers, hole punches
Tweezers, Manicure scissors for cutting precious metal foils
Pickle for removing copper oxidation

Liquid Enamels

At least 2 liquid enamels are recommended:

Note: (<https://www.e-namels.com/> is offering a discounted kit for this workshop
Of liquid enamels from both Thompson and WG Ball. Scott from e-namels also has finer mesh sifters, copper dishes, and other tools and supplies that will be useful to have for this 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, LCE 2, LCE 3, 771, 772 and any other Thompson liquid enamels
(optional) Liquid white and liquid clear enamels from W. G. Ball
(optional) Ferro RM 60C and 9630D (<https://clayartcenter.net>- refer to their numbers RM454 and RM455),

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 2

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

Tools for trailing splattering, dripping, painting liquid enamel on copper.

Toothbrushes, eye droppers, syringes, straws, squeeze bottles, and various size watercolor brushes are a good start for applications of 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

Small palettes to hold misc. materials

Sgraffito tools

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 only be demonstration experimentation using a kiln. 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. A timer is always good when doing comparative measurements and tongs or large tweezers are handy to remove pieces from racks and trivets. A steel press plate is optional but always good to have for keeping flat objects from warping.

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 pr latex gloves

Dust mask (preferably N95) or respirator
Kiln glasses, kiln gloves
Apron

Ventilation

If spraying liquid enamel, a ventilated spray booth is a necessity.
A mask or ventilator should be worn for all other application.