

Keum-Boo on Metal Clay using the UltraLite Kiln

by Celie Fago ©

Removing Burnishing marks:

When you are finished putting the foil on, remove the burnishing marks in any of the following ways. Brass brush your piece with soapy water. If you will go on to patina the piece this is the right preparation. If you're not going to patina, you will enhance the look of the gold by rubbing the piece with a little pumice powder, on a dampened finger. This increases the contrast between the gold and the silver, thus enhancing the color of the gold.

You may also tumble polish the piece. However this will lesson the contrast between the gold and the silver, by increasing the shine, and your gold will be harder to see.

Instructions by Celie Fago

*For more information on Keum-Boo read
"Keum-Boo on Silver", by Celie Fago
<http://www.celiefago.com>*

*For more information on UltraLite Kilns go to
www.jecproducts.com*

Manufactured by JEC Products® USA

The Ultra-Lite kiln takes 25-30 minutes to heat up, so plug it in well ahead of time. If you need to add an extension cord to the kiln's own very short cord, use a 16 gauge cord, not more than 6 feet long (a longer cord creates more resistance so you get less heat in your kiln). Heat the kiln with the red brass Keum-Boo Cover in place. The cover fits above the element and moderates the heat of the kiln making it more pleasant to work over. The brass set of Keum-Boo Covers consists of two pieces: One brass circle has a depression in the middle and is designed for volumetric pieces (beads, rings, etc.) The other is flat, for flat pieces.

There is a gap, in the front wall of the kiln, between the Cover and the kiln. An extension cord will allow you to orient the kiln so that gap is facing to the side or to the back, anywhere but toward you, making it more pleasant to work. **While the kiln heats up, cut your gold pieces.**

You will need the following tools and supplies:

- UltraLite Kiln, short extension cord (if necessary)
- Brass Keum-Boo Cover
- Gold foil (not gold leaf, not enameling foil)
- good, sharp scissors (I use fabric scissors)
- a few sheets plain copy paper
- pencil
- 2 burnisher tools (steel or agate)
- 1 or 2 pairs cross-lock tweezers
- fine, clean tweezers (for picking up gold)
- leather gloves that fit (garden store)

Safety:

Tie your hair back.

Choose gloves that fit.

Wear an apron and leather shoes (not sandals).

Make sure the area is free of flammable objects and put some tiles next to the kiln (so you can set the hot tools down somewhere) next to the hotplate. Place your work light at an angle, i.e.: don't position it directly above the kiln.

Place the kiln on your work surface, at a height that will let you Keum-Boo without bending over the kiln.

Do not brass brush or otherwise alter the surface of your fired metal clay piece before Keum-boo. Metal clay is pristine when freshly fired.

There is no need to clean it before Keum-boo.

Put the silver on the brass Keum-Boo Cover on the kiln. You can place the gold foil on the silver and put it on a cold kiln and heat it all up together or you can put the silver on a hot kiln, and then place your foil. If your piece is volumetric (spherical bead, or a ring) put it in the concavity in the center of the brass Keum-Boo Cover. This will help you hold it in place while burnishing.

If you are using commercially available gold foil (as opposed to hand rolled) any good pair of scissors will cut it. You can also use paper punches and leather punching tools. **Sandwiching the gold in a folded piece of paper will keep the gold from tearing or binding in the scissors.**

Finger oils burn off harmlessly. They do not interfere with the bond between the silver and the gold. Wearing gloves to handle the foil is unnecessary. (The garden gloves recommended are for protection from the heat.)

Specific shapes can be drawn or traced with a template, onto the fold of paper, then used as a guide for cutting. Use backlighting (hold your sandwiched gold up to a light) to position the foil in a folded piece of paper. Place the cut gold shapes on the silver.

Placement:

If a piece of foil drops, pick it up with a dampened finger or tweezers. Adding foil to difficult places, like a vertical side, isn't as hard as it sounds. Remember that if the metal is in the correct temperature range the foil will tack (make a first initial bond) the instant it touches the surface. The challenge is coordinating your two hands; one placing the foil with tweezers, the other tacking, then burnishing the gold. Saliva will hold gold foil in place at least until it dries.

After 25-30 minutes, the brass cover on your kiln will be hot enough for Keum-Boo. Depending on your individual electrical supply, the temperature will be between 745° and 860°, an ideal temp range for this process.

The best indicator of correct heat is a successful result. If the gold adheres, the silver is at the correct temp.

Tack and Burnish:

Although you may not need gloves to protect from the kiln's heat, the steel burnishers do get hot.

Wearing leather gloves, use a burnisher or a cross-lock tweezers to hold the piece steady and the tip (not the point) of another burnisher to tack the middle of a gold shape down. Don't rub, just press to do the initial tack.

Then burnish, using medium pressure, circular movement, and the belly of the tool. Work from the center outward. Burnish the surface of the gold firmly on to the silver, paying special attention to the edges of the gold, and being careful not to trap air as you move from the middle out to the edges.

Tip: If you're using a steel burnisher and it begins to feel 'sticky', stop and swap burnisher, or pause for a few moments and let it cool.

Repairing tears and bald spots:

Add more pieces of gold, overlapping if you like, until you are satisfied with the design. Once you've finished the first side you may turn your piece over and add foil to the other side. Air-cool your finished pieces. Don't be concerned about burnishing marks, later when you pumice or brass brush the piece they will disappear.

Note: When you're finished adding gold, remove your piece promptly. At these temperatures, the gold continues to diffuse into the surface.

Accidental diffusion:

If left on the kiln, the gold will pale as it continues to diffuse into the surface of the silver. Although diffused into the surface, the gold will still act as a resist to patina.

Checking adhesion:

When you have finished, hold the cooled piece up to good light and examine the surface and especially the borders of the attached gold. Run your fingernail along the edges of the gold, and try to lift them. Well-attached foil does not make an abrupt transition at its borders. If you feel an edge with your fingernail, it is not well attached. Simply re-heat and re-burnish.