

# Handmade Silver Foil

## Foil Making Process

- 1) roll down fine silver sheet to approximately .003 inch thickness
- 2) “Flash” fine silver sheet pieces in hot plate style kiln
- 3).Texture the foil
- 4) cut pieces of foil into desired shapes
- 5) dome foil pieces to conform to surface you are enameling
- 6) use Blu-Stik glue to hold into place
- 7) Fire the foil;if possible, touch pieces of foil down slightly immediately after removal from kiln
- 8) cover with transparent enamel (sifted or wet)

## 1) Thin your metal to .003 inch thickness

I use a rolling mill, annealing after every one or two passes through the mill. With each pass I roll the metal back and forth several times (not just one pass through).

Anneal in between rolls. You can either anneal silver in a kiln or with a torch.

Decrease the space between rollers just slightly for each roll. If you tighten too much the metal will begin to wrinkle or even tear. This is especially important when you get down to the thinnest pieces.

You can double up your pieces when you get the rollers down as tight as they will go.

Open up the rollers slightly to allow the doubled layers through. Use freezer paper or something similar to help keep the pieces from laminating together if necessary.

You do not need to anneal after the last roll, unless you use a steel block to burnish out any wrinkles.

## 2) “Flash” the fine silver foil pieces

This is a process of heat treating the fine silver so that it will keep it's mirror-like reflective qualities throughout the enameling process. Normally, fine silver turns matt white when heated. “Flashing” melts the surface just enough to liquefy the metal slightly,which seems to seal any porosity.

I place the foil pieces on the surface of a hot plate style kiln. Let the pieces heat up, and then using a torch (oxygen, propane, butane; whatever you have), play a slightly bushy flame over the surface quickly and evenly to heat the foil just until it start to melt. You will see a “flash” appear on the surface. Pay attention to to how close you are with the torch, what part of the flame you are using, how hot the kiln surface, how long the foil is on the kiln surface, etc. Find the right combination so you don't melt your foil pieces.

### 3) Texture the foil

There are several easy ways to create texture or pattern on your foil pieces:

emboss: use a rolling mill or Cuttlebug type embossing machine (for scrapbooking)

scribe: use sharp tools to “draw” into the foil

stamp: using chasing tools, hold the foil over a steel block and gently tap the tools

fold form: fold foil pieces together, flatten the fold on a steel block with a hammer, and then open it up.

punches: you can use a variety of paper punches to create patterns in the foil or to punch out shapes to use

scrapbooking scissors: create decorative strips, shapes, or edges

Use a combination of any of the above texturing techniques.

### 4) Cut Foil Pieces.

Use scissors to cut your foil into pieces for application onto your enamel surface.

You can use one large piece or several pieces placed next to each other.

Use Punches to punch out shapes.

### 5) Dome the Foil Pieces

The thin foil will begin to warp as you work harden it as you texture and cut the pieces.

I usually don't need to anneal the pieces to soften them enough for doming, but if

necessary place in kiln or use a torch. To shape prior to application, either use the enamel surface you will be using or find something with similar contour. If applying to a cloisonne' enamel piece, you would be careful not to have your fingers damage your wirework; find something with a similar dome, such as another enamel piece.

Press the foil over the dome gently with your fingers until it has the form you want.

### 6) Glue the foil pieces in place.

I use Blu Stic glue; it holds much better than klyr fyre. You only need a drop or so to hold it into place. You can either hold the foil with tweezers, dip lightly into the glue to get some onto the back of the foil, or use a small tool or brush to place a dab of the glue onto the back of the foil.

Place the foil where you want it. The glue dries fairly quickly ( within a few minutes) so get it into the position you want right away. Even when the glue is dry you can still peel the foil up with a tweezers if you need to move it. The glue does not need to dry before firing.

## 7) Fire the foil into place on the enamel

Heat your enamel either in a kiln or with a torch. When the enamel melts, the foil will stick in place. When you pull the piece out of the kiln, use a long tweezer or small spatula to gently touch the foil into the enamel to create a strong bond. If the piece seems loose heat again to ensure that it is fixxed onto the enamel surface. If you are torch firing the piece, you can reach in with a long tweezer and touch the foil down while you are heating the piece.

## 8) Cover the foil with transparent enamels

You can either sift or do a wet appliction onto over the foil. If you are using colors which are reactive to silver, make sure that there is a coat of flux or other buffer color underneath the reactive enamel. Because the texture creates high and low areas in the foil, make sure that there are no high, uncovered areas of foil before applying a reactive enamel. As with any other application of transparent enamel, take care to remove any fine particles from the enamel for optimal clarity.

If you are sifting, remove the fine particles with a 300 mesh sifter.

If you are applying wet, rinse out the fine particles with water.

# Foils: Application and Expressive Use

## Foil creates reflected LIGHT

This lightens color/hue and changes the hue depending on the type of metal used

## Foil creates a SHAPE

More than one piece creates a PATTERN

## Foil creates an EDGE

There is a cliff where the foil ends and base layer of enamel is visible

## Foil COVERS UP bottom layers

If used too high in the layering process you may ground down into it

## Foil can be EMBOSSED, STAMPED, PUNCHED, FOLDED, SCRIBED

## Foil can create a chemical reaction with the layer fired over it

Enamels will react the same to a fine silver foil as to silver. you may need buffer layers

## Foil Tips

You can use or make gold, silver, copper foil

Use klyre fyre or blu stic to hold foil in place. Fire before adding enamel over foil

I roll my handmade foil down to approximately .003 inches thickness

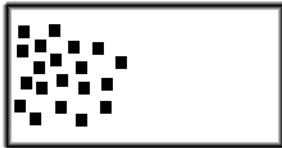
Keum Boo gold foil must have enough gold to not dissolve into the enamel at the high melting point of the enamel. Use a thick layer of gold or several thin layers of commercial gold foil.

You can fire enamel onto thicker foil separately, and then fire/heat laminate that onto the base layer of another enamel surface

Foil pieces (thin commercial foil) can be overlapped as long as some of the foil is touching the base layer of enamel.

# Foil Phrases

1. opaque enamel with foil pieces creating a texture (covered with flux)  
foils pieces can create a pattern.
2. textured foil background for bass taille pattern  
single piece of foil or mosaic effect
3. foil over opaque black covered with transparent color
4. foil over opaque white covered with transparent color
5. foil gradation: from large pieces to small pieces
6. fill a cell with foil (overlapping)
7. use foil elements as “bridges” between dark and light backgrounds
8. foil elements layered over base coats of foil
9. hiding edges of foil with dark transparent shading



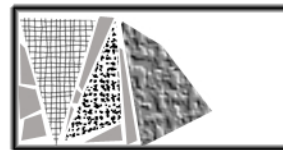
small gold pieces as texture  
over opaque color



foil as bridge element  
between opaque black/white



Foil gradation  
over opaque white



handmade & commercial foil  
as mosaic



silver foil pattern over opaque white/black



cloisonné' cell filled with  
overlapped foil pieces

# Reflective Light Considerations

Light (like color and value) creates:

Shape/edges: a foil shape creates an edge along the outside of the shape

Line: a series of foil pieces will create a line for your eye to follow

Pattern & Texture

Some choices to consider

Metal: silver, gold, copper

Commercial or Handmade foil

Textured base

Methods of texturing metal

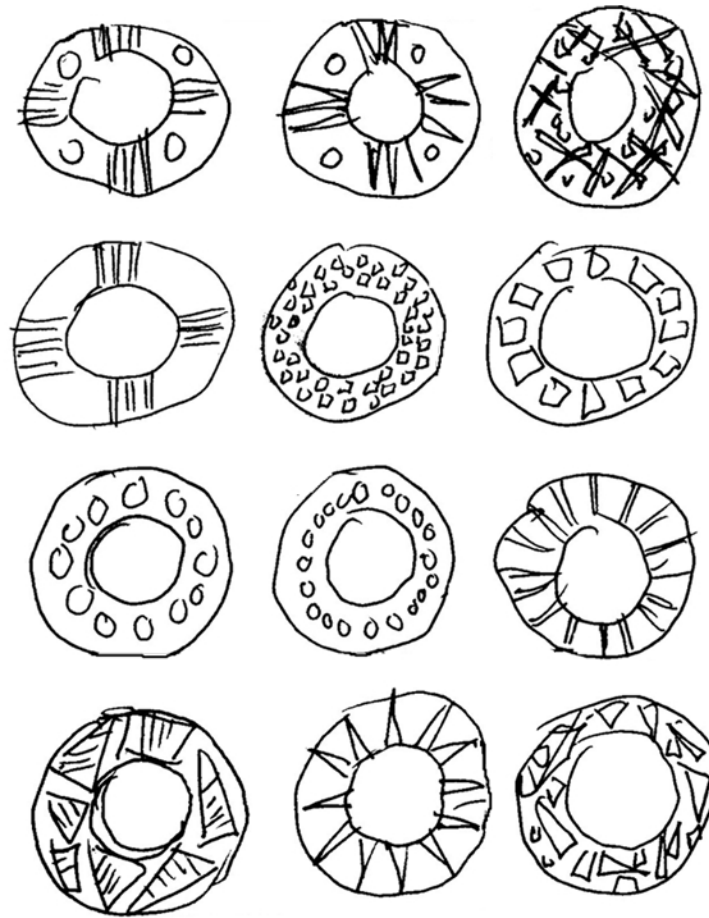
Methods of Adding Light

Value of “relected light” area

Design Principles: Balance, Unity, Dominance

Amount of Transparency:: transparent or opalescent

Depth of Transparency



Some radial foil pattern applications