

Enameling

eBook



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Table of Content

Glass Enameling	3
Kiln Fired Copper Enamels.....	5
Torch Fired Copper Enamel Jewelry	8
Tools and Supplies	10



This winter Delphi hosted an employee craft night to try out new products and learn a new technique. Employees created the mural above with glass and copper tiles using our new Milton Bridge Enamels for Delphi. They also created unique jewelry while learning about torch firing enamels to achieve different effects. Check out what we created and learn more at www.DelphiGlass.com/Enamels and then share your own finished project with us at www.DelphiGlass.com/Gallery.

Please note that items numbers listed in these project guides are suggested items that can be purchased at www.DelphiGlass.com. The items may not always be identical to those used in these project examples and are subject to change.

Glass Enameling

Equipment Required:

Glass Kiln

Materials Used:

3" x 3" Fusible Clear Glass Squares

Glass Enamel Pen Assortment (#68150)

Assorted paint brushes (#740201)

Bullseye Thin-Fire Shelf Paper (#7405)

Basic Instructions:

Clean and dry glass thoroughly

Draw your design on the glass with the enamel pen or with a paint brush.

If you notice gaps or thin spaces after your enamel is dry you can apply additional layers.

Allow enamel to dry thoroughly before firing.



Glass Enameling

Place Thinfire shelf paper in the bottom of your kiln or apply shelf wash to your kiln shelf to prevent sticking.

Place your glass in the kiln and fire.

Glass enamels mature between 1382° F and 1450° F.



Kiln Fired Copper Enamels

Equipment Required:

Enameling Kiln (#75812)
Heat Resistant Work Surface (#425705)
Respirator (#5159)
Firing Trivet (#75811)
Firing Fork (#75810)
Stainless Steel Firing Rack (#75809)

Materials Used:

Copper Enamel Pen Assortment (#68130)
3" x 3" 40 Gauge Copper Sheets (#89213)
Assorted paint brushes (#740201)



Kiln Fired Copper Enamels

Basic Instructions:

In a plastic or glass container, mix Sparex with water according to directions to create a “Pickle” to clean your copper.

Note: Do not store pickle in a metal container.

Clean your copper blank by soaking it in the pickle for no more than 15 minutes. To avoid contamination, use copper tweezers or copper wire to remove the blank.

Rinse your copper blank. Water should bead and run off the blank smoothly. Avoid touching the surface to be enameled. Oils from your skin can prevent enamel from binding properly. Dry with a clean cloth or paper towel.

Using the enamel pen or a paint brush apply your design to your copper blank. You can use a toothpick or a Kemper Wipe Out Tool to smooth the edges of your lines if necessary.

Allow enamel to dry completely before firing.



Kiln Fired Copper Enamels

Place the copper piece on the firing trivet and the trivet on the stainless steel firing rack.

Using the firing fork, carefully place the rack into the hot enameling kiln.

Don't walk away! It can take 30 seconds to a few minutes to complete firing.

Firing is complete when enamels are shiny and smooth.

Use the firing fork to remove the rack from the kiln and set it on a heat resistant work surface to cool.

Rinse with water and use alundum stone to clean and remove fire scale from edges.



Torch Fired Copper Enamel Jewelry

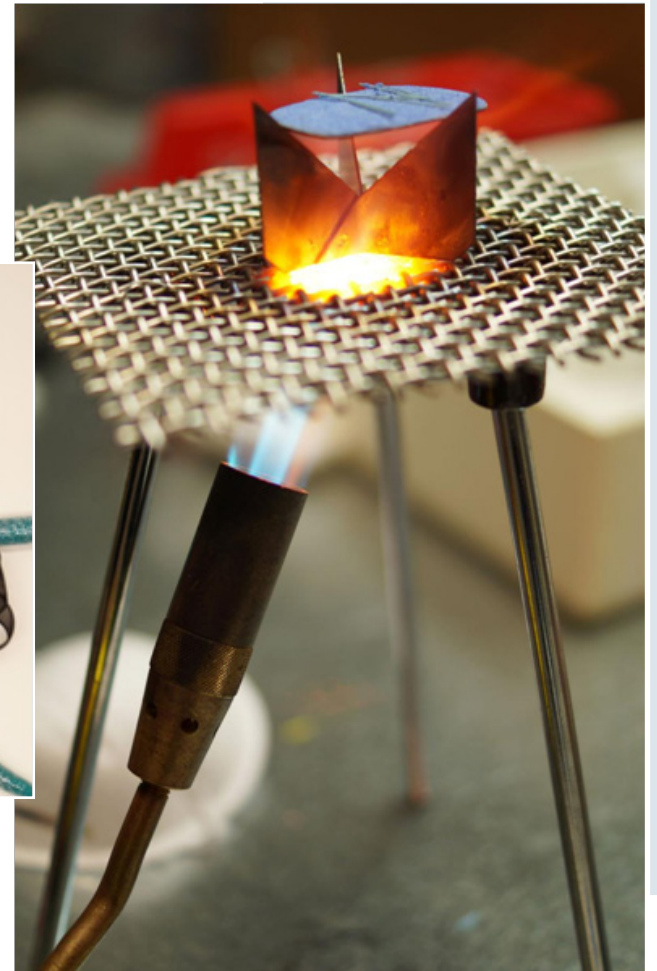


Equipment Required:

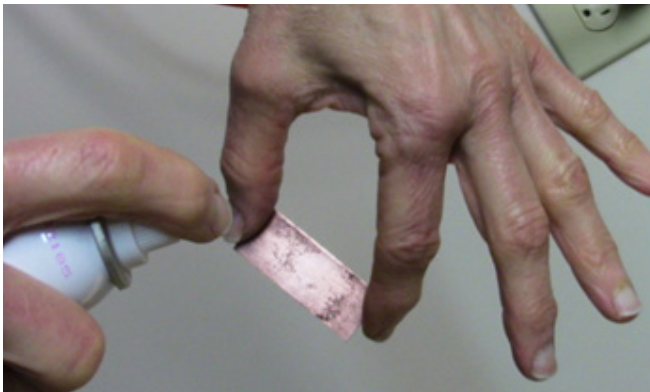
- Enameling Tripod (#63418)
- Torch Head (#7329)
- Mapp Gas (Available at your local hardware store)
- Firing Trivet (#75811)
- Respirator (#5159)

Materials Used:

- Opaque Enamels (#75816)
- Transparent Enamels (#75817)
- Thompson Klyr-Fire (#7405A1)
- Spritz Bottle (#75901)
- Enamel Sifter (#75803)
- Sparex (#75836)
- 220 Grit Alundum Stone (#75900)
- Copper Blanks



Torch Fired Copper Enamel Jewelry



Basic Instructions:

In a plastic or glass container, mix Sparex with water according to directions to create a "Pickle" to clean your copper. Note: Do not store pickle in a metal container. Clean your copper blank by soaking it in the pickle for no more than 15 minutes. To avoid contamination, use copper tweezers or copper wire to remove the blank. If your copper blank has a hole in it, twist a piece of copper wire through the hole and then hook it on the side of the container for easy removal.

Rinse your copper blank. Water should bead and run off the blank smoothly. Avoid touching the surface to be enameled. Oils from your skin can prevent enamel from binding properly. Dry with a clean cloth or paper towel.

Using the spritz bottle, spray the blank with Thompson Klyr-Fire. Using the sifter, sift dry enamels where desired onto your metal blank and allow to dry.

Delphi Tips:

You can use bottle caps to prop your copper blank off your work surface to avoid contamination.

To prevent warping, pieces must be enameled on both sides. We suggest enameling the back of your piece first with a solid base color.



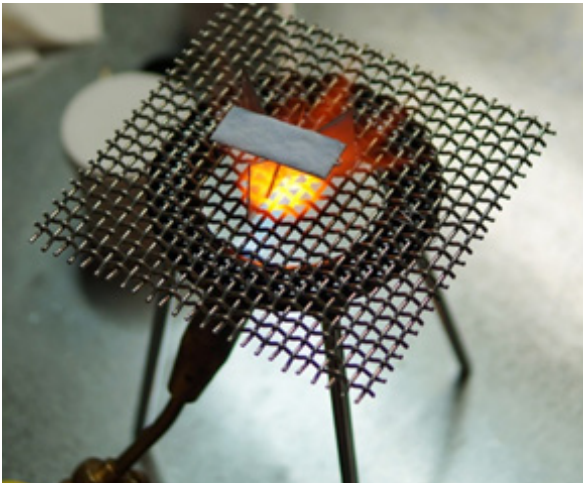
Torch Fired Copper Enamel Jewelry

Set your project on the trivet.

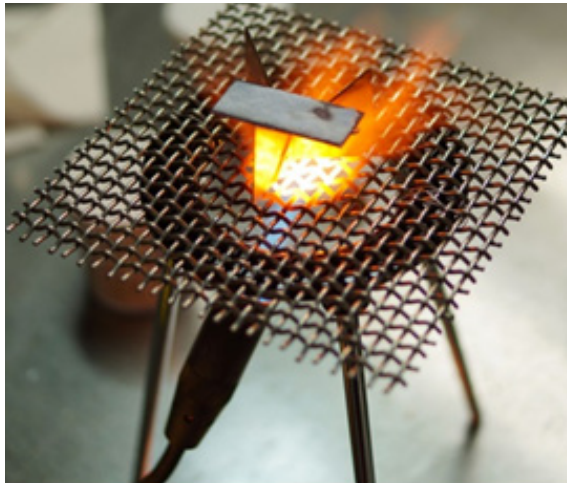
Ignite torch. Apply torch flame to the bottom of the copper blank for approximately 30 seconds.

Your enamel will progress through three stages:

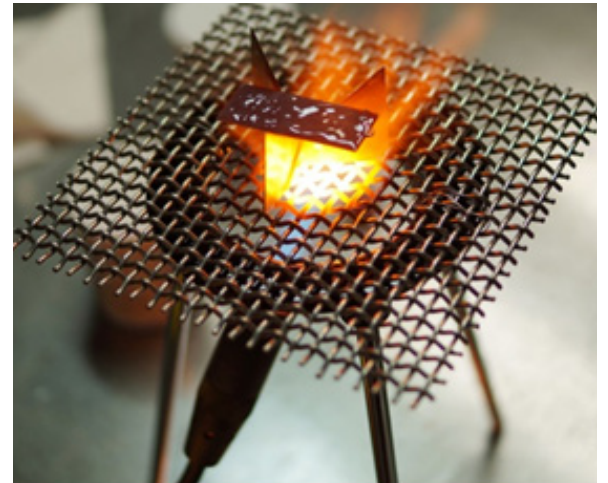
- Sugar: Your enamel will have a gritty look - resembling sugar - when it begins to heat
- Orange Peel: Enamel will appear dimpled and slightly shiny - similar to the outer skin of an orange.
- Complete: Your enamel should be smooth and shiny - you should remove your torch at this stage.



Sugar



Orange Peel



Complete



Add additional layers of enamel until you have achieved the desired affect - it's not generally recommended to apply more than 3-4 enamel layers.

When complete rinse with water and use alundum stone to clean and remove fire scale from the edges of your copper blank.



Tools and Supplies to Get You Started



*Glass Enamel Pen Beginner Kit
Item #68150*



*Delphi EZ Pro 15-6
Glass Kiln
Item #68813*



*Metal Enamel Pen Beginner Kit
Item #68130*



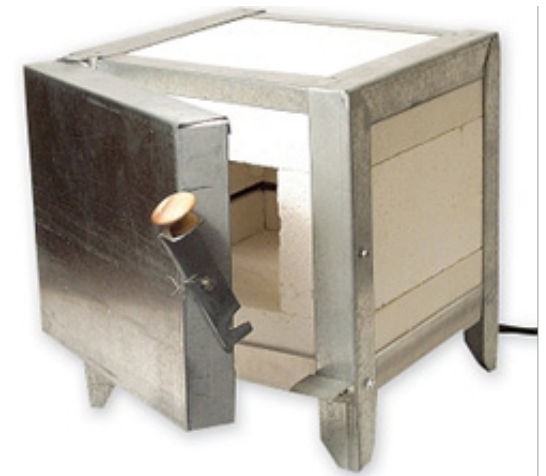
*Copper Enamel Starter Kit
Item #75849*



*Hot Head Torch Head
Item #7329*



*Enameling Tripod with Steel Screens
Item #63418*



*Economy Enameling Kiln
Item #75812*