

APPLICATION TIPS



GOLD LEAF AND LASERS



Introduction

Gold leaf is gold that's been hammered into a thin foil so it can be used to decorate art work, picture frames, books, and even food and drink. Applying gold leaf is called **GILDING**. The process requires several specialized tools and supplies, including primer, sizer, brushes, knives, and pads. Gold leaf comes in sheets or rolls and can be expensive. There are two types of gold leaf, loose leaf and the thinner leaf adhered to a paper backing, both will work for the processes in this tip sheet. Gilding supplies can be purchased online or at most local craft stores.

Overview

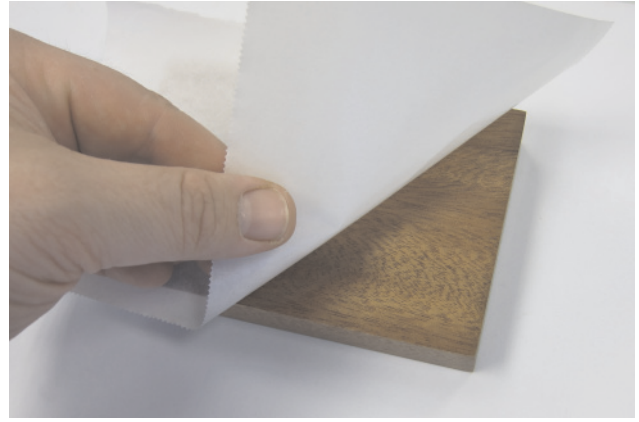
This application tip has been broken into three processes that have been found to work with laser systems. Some materials work better than others and one or all processes can be used on any single part.

1. Surface gilding within a laser cut outline. (Pages 2- 5)
2. Sub-surface gilding into a laser engraving. (Pages 6-8)
3. Surface gilding then laser engraved. (Pages 9-10)

SURFACE GILDING WITHIN A LASER CUT OUTLINE



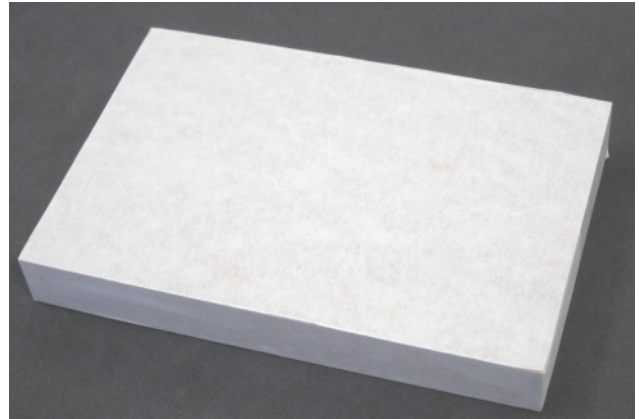
1. Determine the item to be gilded. In this case we are using a block of completely finished, lacquered, hard mahogany wood.



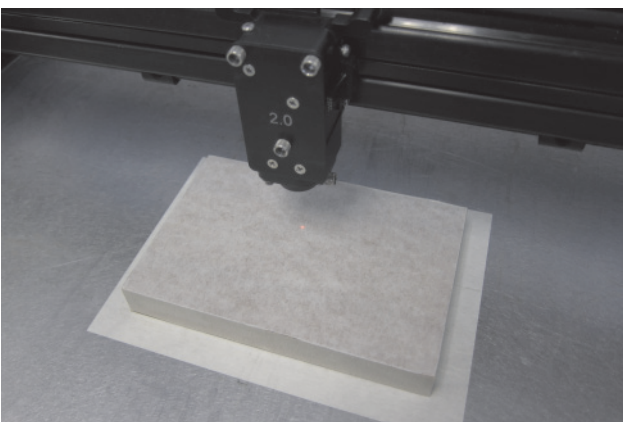
2. Prepare the item to be gilded by using transfer or **application tape to cover all areas. Surface cleaning may be necessary.



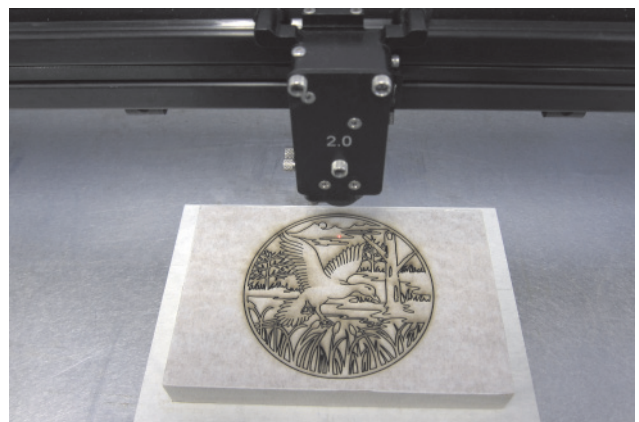
3. Squeegee down **application tape so there are no air pockets.



4. Mask the edge of the wood block with standard masking tape.



5. Place part into your Universal Laser System to engrave your desired image.



6. Engrave your image through the **application tape using standard hard wood settings.



7. Carefully remove the **application tape to expose the areas that you want to be gold gilded.



8. Ready for gold gilding.



9. Paint on a gilding *size. This is an adhesive that will dry to a tacky consistency in a few hours. It will then remain tacky for several more hours, giving you time to apply the gold leaf.



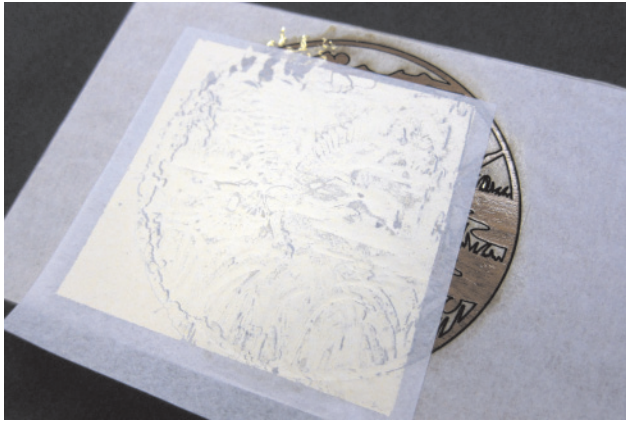
10. Wait 15 minutes to a few hours for the *size to dry. (you will know it is dry when you no longer see the “milky” white color of the *sizer glue.)



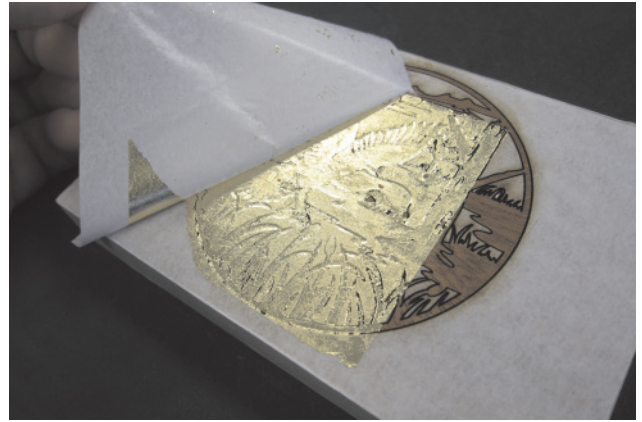
11. Apply the gold leaf. Carefully peel the leaf from the paper backing and apply it to the item (loose leaf only). Or, you can lay the leaf with backing on the surface (shown above).



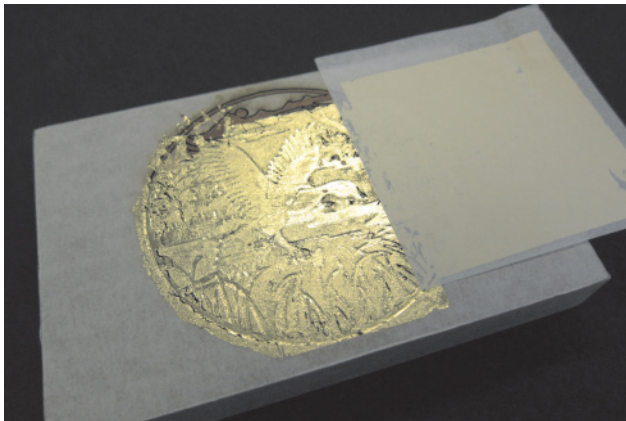
12. Press the gold leaf onto the part, a squeegee may be helpful to get a firm adhesion.



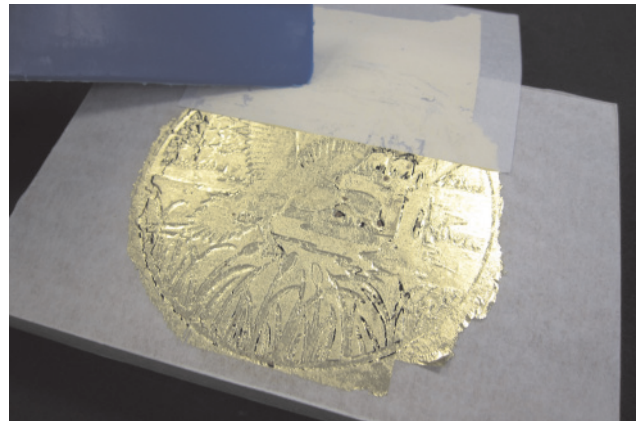
13. The paper backing on the leaf should be face up.



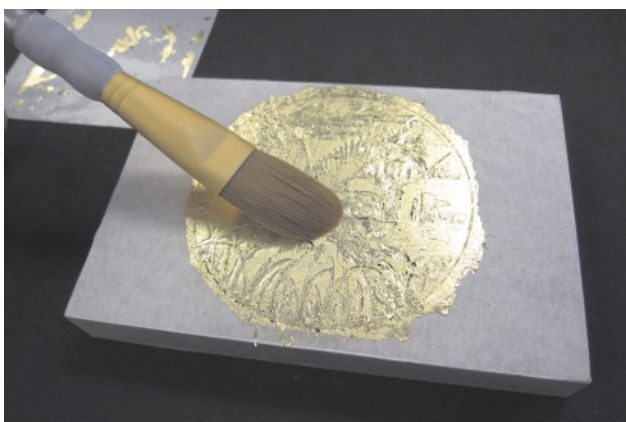
14. Slowly peel away the paper backing to expose the gold leaf adhered to your part.



15. Continue the process of adding gold leaf until you have completely covered the desired area.



16. Multiple coverings of the gold leaf may be necessary in order to get a fully covered part.



17. Brush the leaf with a soft gilder's brush to make it adhere to the item completely and smoothly. When finished the item should appear as if it is made of gold rather than covered in gold leaf.



18. Dab into the engraved areas to bring out the details brushing lightly until everything is smooth. More gold leaf may be necessary to cover any bare spots.



19. Let the part sit for about 30 minutes, then remove the paper **application tape.



20. Very carefully remove any **masking in the detailed locations. (tweezers may be needed for this).



21. Use the fine tip brush to clean any extra debris. It is unnecessary to seal gold leaf that is rated 22 karat or higher unless the part will be handled.



22. If the part is going to be handled, seal the gold leaf by applying an ***acrylic paint topcoat. The topcoat will protect the leaf from damage due to handling, dust, water and ultraviolet light.



23. Closeup of finished laser gilded part.

***Gilding Size or Adhesive Size**

(Glue compound designed to adhere metal leaf): Can be purchased at most craft stores or online.

****Application Tape or Transfer Tape:**

This is the wide high TAC masking tape designed to seal the surface material from residue. Can be purchased at sign shop or online.

*****Polyurethane Paint or Clear Acrylic Paint**

Designed to seal and protect the gold leaf when handled or when under 22 karat is used. Can be purchased at any hardware store.

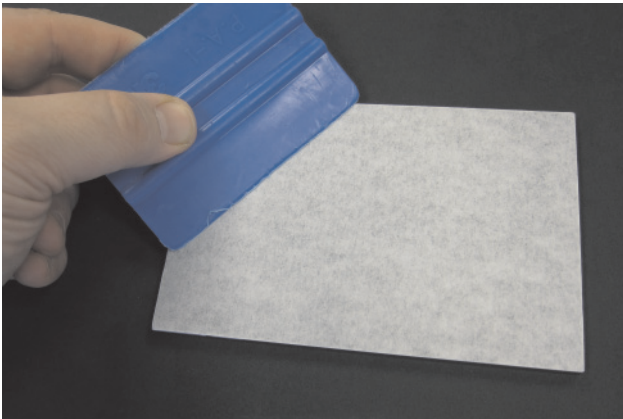
SUP-SURFACE GILDING INTO A LASER ENGRAVING



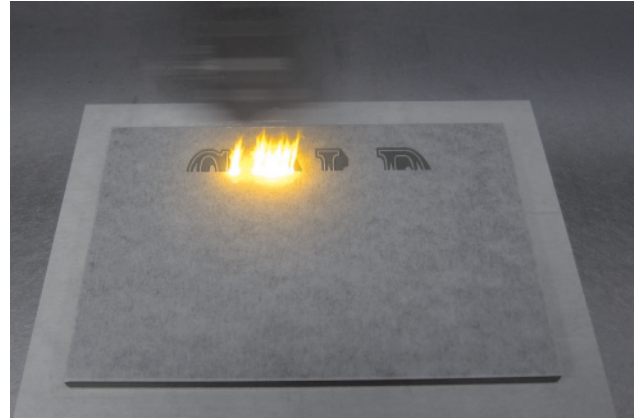
1. Determine the item to be gilded, in this process we are using black glass.



2. Prepare the item to be gilded by using transfer or **application tape to cover all areas.



3. Squeegee down **application tape so there are no air pockets.



4. Place glass into your Universal Laser System and engrave your image through the **application tape.



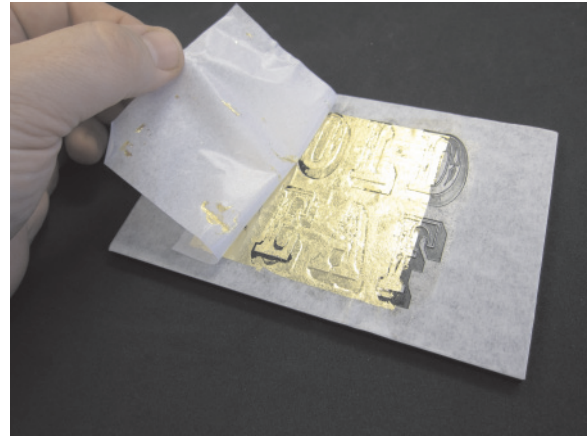
5. Finished engraving ready for gilding.



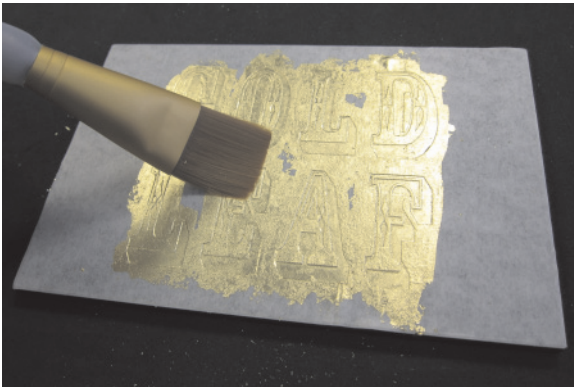
6. Paint on a gilding *size. This is an adhesive that will dry to a tacky consistency in a few hours. It will then remain tacky for several more hours, giving you time to apply the gold leaf.



7. Apply the gold leaf. Carefully peel the leaf from the paper backing and apply it to the item (loose leaf only). Or, you can lay the leaf and backing on the surface.



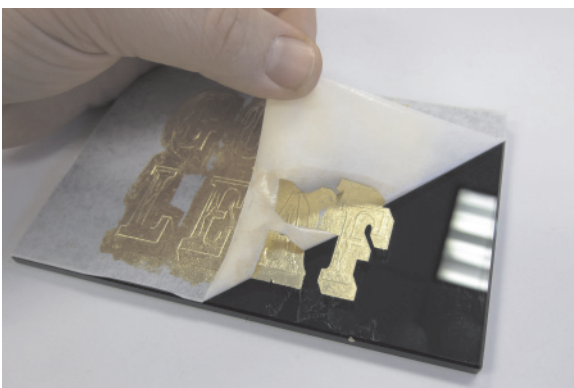
8. Press the gold leaf onto the part, a squeegee may be helpful to get a firm adhesion. Slowly peel away the paper backing to expose the gold leaf adhered to your part.



9. Multiple coverings of the gold leaf may be necessary in order to get a fully covered part. Brush the leaf with a soft gilder's brush to make it adhere to the item.



10. When finished the item should appear as if it is made of gold rather than covered in gold leaf.



11. Let the part sit for about 30 minutes, then slowly and carefully remove the paper **application tape.



12. Very carefully remove any **masking in the detailed locations. (tweezers may be needed for this).



13. Use the fine tip brush to clean any extra debris. You don't need to seal gold leaf that's rated 22 karat or higher unless the part will be handled.



14. If the part is going to be handled. Seal the gold leaf by applying an ***acrylic paint topcoat. The topcoat will protect the leaf from damage due to handling, dust, water and ultraviolet light.



15. Finished laser gilded part.

***Gilding Size or Adhesive Size**

(Glue compound designed to adhere metal leaf): Can be purchased at most craft stores or online.

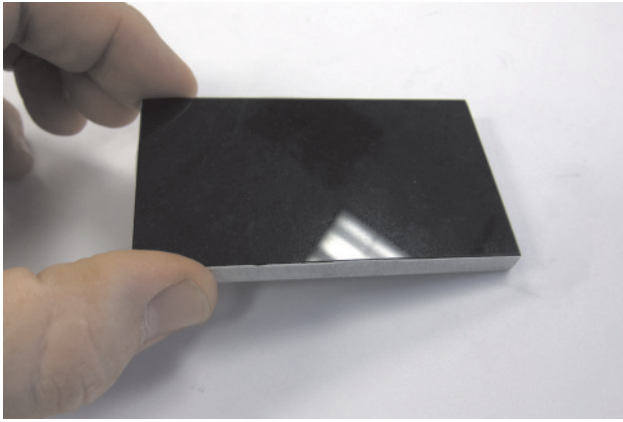
****Application Tape or Transfer Tape:**

This is the wide high TAC masking tape designed to seal the surface material from residue. Can be purchased at sign shop or online.

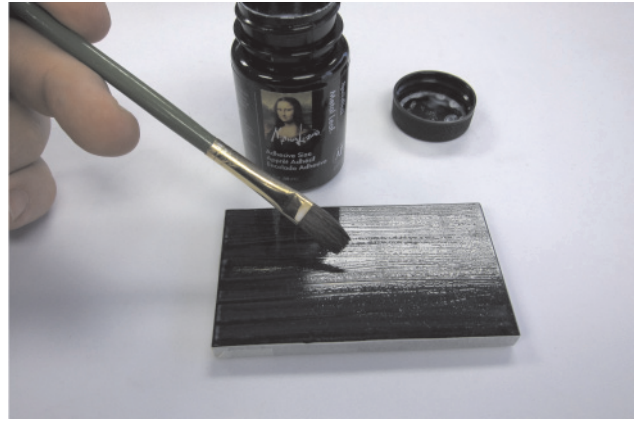
*****Polyurethane Paint or Clear Acrylic Paint**

Designed to seal and protect the gold leaf when handled or when under 22 karat is used. Can be purchased at any hardware store.

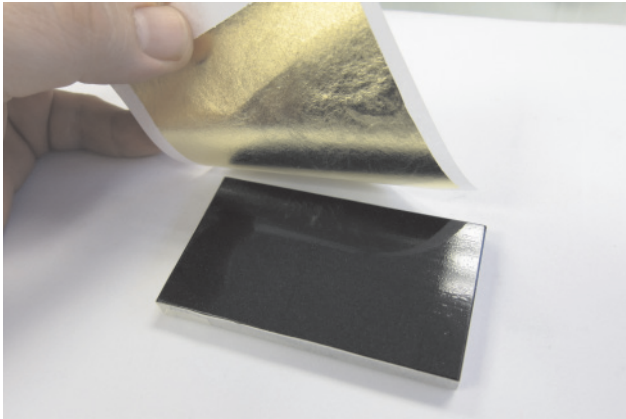
SURFACE GILDING THEN LASER ENGRAVED



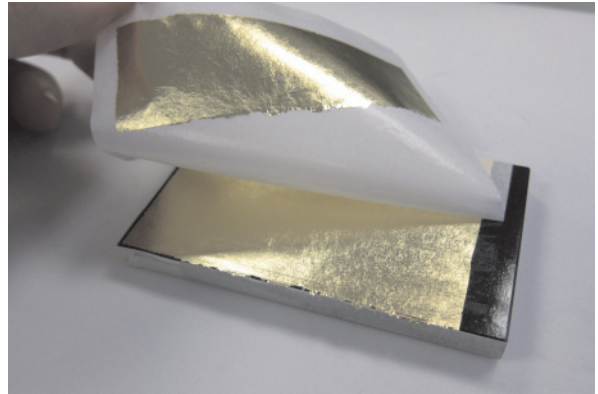
1. Determine the item to be gilded. In this case we are using a block of black marble. Clean the surface of the marble with alcohol. Mask the edges if they are not going to be gilded.



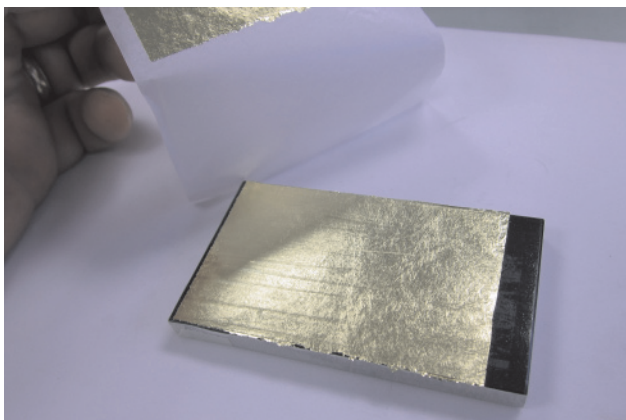
2. Paint or spray on a gilding *size. This is an adhesive that will dry to a tacky consistency in a few hours. It will then remain tacky for several more hours, giving you time to apply the gold leaf.



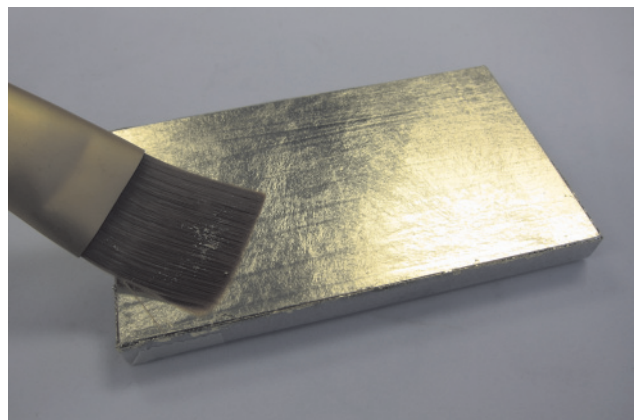
3. Apply the gold leaf. Carefully peel the leaf from the paper backing and apply it to the item (loose leaf only). Or, you can lay the leaf and backing on the surface.



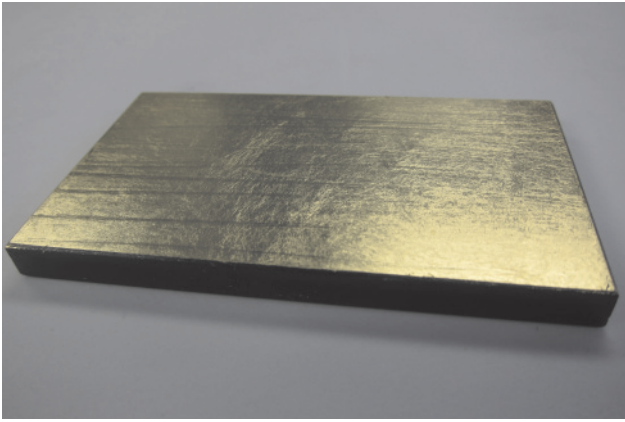
4. Press the gold leaf onto the part, a squeegee may be helpful to get a firm adhesion. Slowly peel away the paper backing to expose the gold leaf adhered to your part.



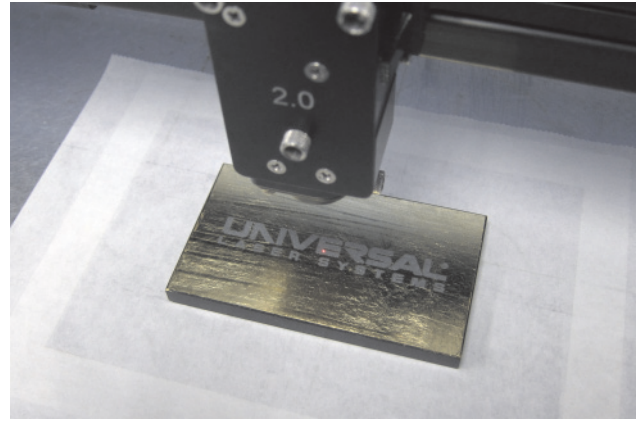
5. Continue the process of adding gold leaf until you have completely covered the desired area.



6. Brush the leaf with a soft gilder's brush to make it adhere to the item completely and smoothly. When finished the item should appear as if it is made of gold rather than covered in gold leaf.



7. Remove the making tape from the edge in this case.



8. Place part into your Universal Laser System to engrave your image through the gold leaf using standard marble settings. (The layer of gold is so thin it will not interfere with the laser engraving process)



9. If the part is going to be handled. Seal the gold leaf by applying an ***acrylic paint topcoat. The topcoat will protect the leaf from damage due to handling, dust, water and ultraviolet light.



10. Finished laser gilded part.

UNIVERSAL[®]
LASER SYSTEMS
7845 East Paradise Lane
Scottsdale, AZ 85260
(800) 859-7033 U.S.
(480) 483-1214 Global
www.ulsinc.com

***Gilding Size or Adhesive Size**

(Glue compound designed to adhere metal leaf): Can be purchased at most craft stores or online.

****Application Tape or Transfer Tape:**

This is the wide high TAC masking tape designed to seal the surface material from residue. Can be purchased at sign shop or online.

*****Polyurethane Paint or Clear Acrylic Paint**

Designed to seal and protect the gold leaf when handled or when under 22 karat is used. Can be purchased at any hardware store.