

Laser Processing Guide: Color Fill

Many laser engraved materials can be enhanced with the addition of color. This guide will cover examples in wood, synthetic stone, acrylic, glass, and marble. Please see the appendix for information on materials used in this guide.

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Wood

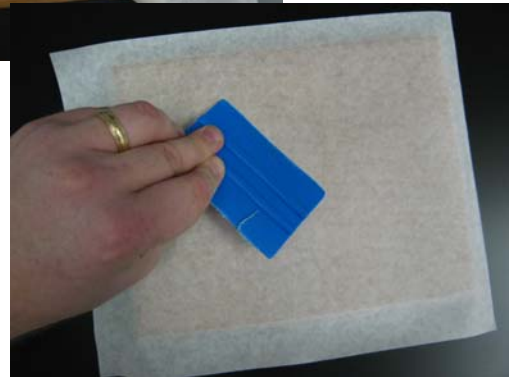
There are two main methods of creating color-fill in wood: spray paint or brush-on darkening. Both will be covered in this section.

Paint-Filled Wood

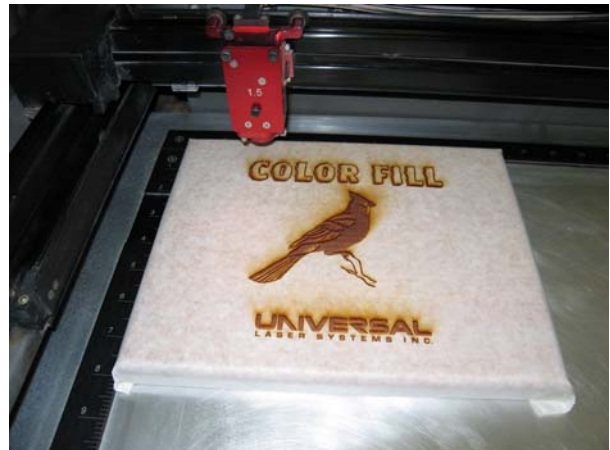
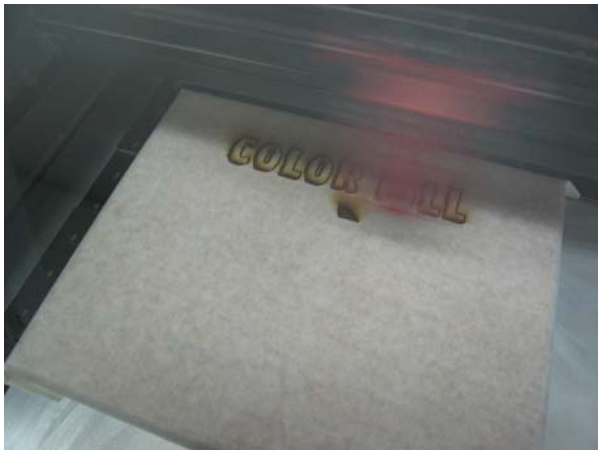
1. Begin by covering finished wood with transfer tape.¹



2. Squeegee the transfer tape down, making sure to remove any trapped air bubbles.



3. Place and align the prepared wood in the laser. Engrave a black and white graphic (do not use grayscale or 3D mode) through the tape and into the wood below. Use standard wood settings from the Materials Database.



4. After the engraving is finished, apply a clear coat of lacquer or polyurethane to the engraving and let it dry completely. This process seals the grains of the wood and prevents paint from soaking into them, which may cause an undesirable look.

Note: Make sure to match this clear coat to the finish already on the wood. Mixing lacquer and polyurethane will cause a reaction, making the wood appear white.



5. After the clear coating has completely dried, repeat the process with paint. Multiple coats are recommended for the best results, and make sure to let the paint dry between each coat.



6. Once the paint is completely dry, carefully remove the mask. Be sure to check centers of letters and any detailed engraving for transfer tape. Your project is complete!



Wood, Brush on Darkening

1. Engrave a black and white image directly onto finished wood. Clean any residue from the surface.
2. Brush black powder coating² into the engraving.



3. Wipe away any excess coating and you are finished. A clear coat can be applied to the wood to protect the finished engraving, if desired.



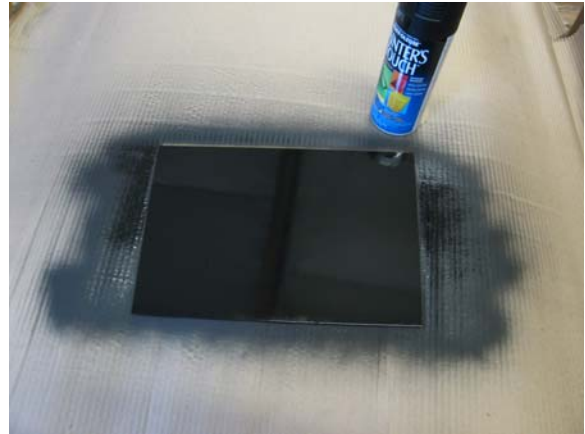
Synthetic Stone (Corian®)

Use the paint-filled wood tutorial to achieve color fill in synthetic stone. You will not need to apply a clear coat as in Step 4 of the wood guide. Once the paint has dried and the masking has been removed, use wet sand paper to clean the surface.

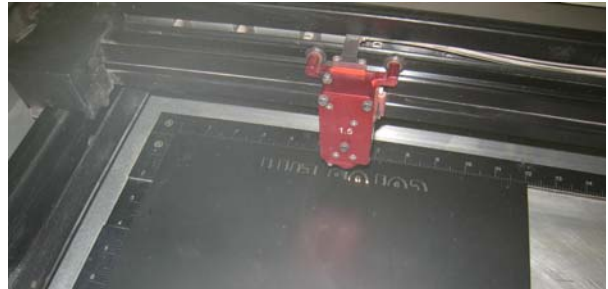


Acrylic

1. Paint one side of a clear sheet of acrylic, leave the other side masked. Allow this background color to dry completely.



2. Place the acrylic into the laser with the paint side facing upward. Mirror the intended graphic or text, since it will be viewed from the other side when it is complete. Begin with the standard acrylic engraving settings and adjust as needed to provide enough power to penetrate the paint into the acrylic.



Note: Depending on the chosen background color, the intended image or photo may need to be inverted as well. The image was inverted for use with the black background shown above.

3. If areas with different colors are desired, mask off the engraving in these areas.



4. Spray the desired color onto the exposed engraving.



5. Remove the masking from the areas where other colors are desired. Apply paint to these areas and allow all paint to dry completely.



6. Remove the masking from the other side to reveal the finished product.

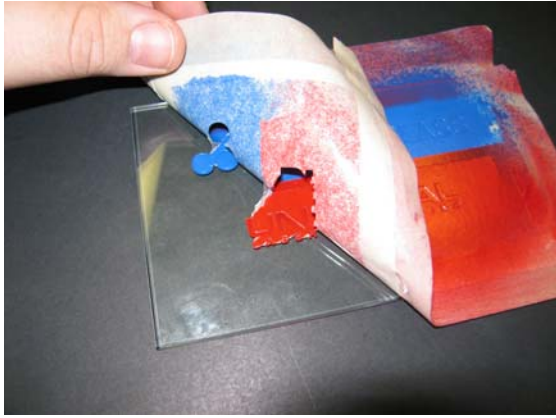


Glass

There are two main methods for creating a color fill on glass: applying spray paint or rubbing an oil-based paint into the engraved areas. See the Engraving Glass guide for more information on processing glass.

Glass, Spray Paint

Use the paint-filled wood tutorial to achieve color fill on glass. You will not need to apply a clear coat as in Step 4 of the wood guide.



Glass, Rub in Paint Fill

1. Engrave the glass using the halftone technique outlined in the Engraving Glass guide.



2. The first method is to use Rub 'n Buff³. Place a small amount of Rub n' Buff onto the engraving and rub it across the surface of the area you wish to color. Polish the excess from the non-engraved areas using a cloth or paper towel.



3. An oil-based paint will behave the same way: rub the paint into the areas you would like to color and buff off any excess from the non-engraved areas.



4. Once the excess has been removed, your project is complete.



Note: This process can also be applied to the back side of the glass. Mirror your image or text prior to engraving, then you will look through the glass to view the color.



Marble

Marble will work well with the same rubbed-in paint method that was used for glass. Either an oil-based paint or Rub n' Buff can be used to color an engraved area on marble. White paint is especially good for improving contrast on black marble.

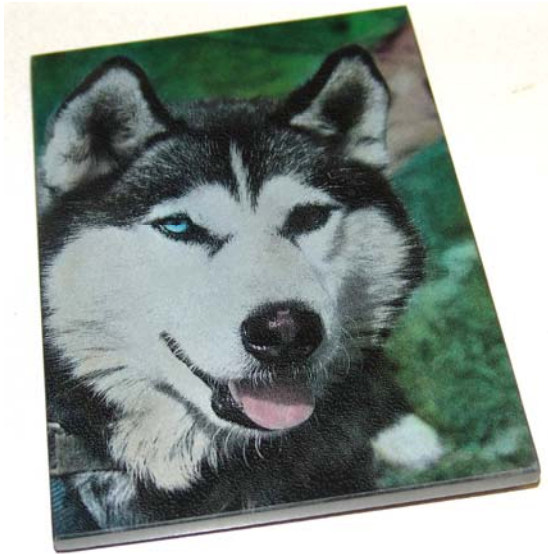


Before



After

By strategically placing oil paint onto the engraving, the illusion of a colored photo can be created. Just match the paint colors to the original hues in the photo and the engraved areas will provide proper shading for a very realistic effect:



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1. Transfer tape: this can be found at <http://www.denversignsupply.com>.
2. Black powder coating: this can be purchased from most paint manufacturers or Harbor Freight.
3. Rub n' Buff: this can be found at <http://www.amaco.com>.