Colorfil
INSTRUCTIONS
COLORFIL SUPPLIES

SUPPLIES REQUIRED:
- HOT AIR GUN
- DENATURED ALCOHOL
- CLEAN WHITE RAG
- NYLON BRISTLE SCRUB BRUSH (toothbrush)
- ORBITAL SANDER
- ORBITAL ABRASIVES
- SPRAY BOTTLE WITH WATER

SUPPLIES PROVIDED:
- COLORFIL RESIN
- COLORFIL ACTIVATOR
- GLOVES
- PAPER CUPS
- STIR STICKS
- TOOTH PICKS
- INSTALLATION INSTRUCTIONS

MATTE FINISH:
- 150; 180; 220,
- MAROON SCOTCH BRITE PAD

HIGH GLOSS FINISH:
- 30 MICRON
- BUFFING WHEELS
- OR HAND HELD BUFFER/POLISHER
- BUFFING ROUGE OR COMPOUND

OPTIONAL:
- SCALES
- SANDING ERASER
- AIR COMPRESSOR

FORMULAS TO DETERMINE RATIOS FOR COLOR FILL MIX:

NOTE: Exact ratios are important in proper activation of the materials. Weighing is an easy way to measure ratios but volume can be used if scales are not available. DO NOT mix more than can be dispensed in 2-4 minutes. The larger the volume of material mixed with activator at one time, the faster the material will harden. DO NOT use the material once the exaltherm starts.

4:1 Weight of Colorfil Resin or volume divided by 4 then add that amount of Colorfil Activator for the total amount of Colorfil.
Example: 12 grams of Colorfil Resin divided by 4 = 3 grams of Colorfil Activator. Add 12 grams of Colorfil Resin + 3 grams of Colorfil Activator = 15 grams total weight or volume.

5:1 Weight of Colorfil Resin or volume divided by 5 then add that amount of Colorfil Activator for the total amount of Colorfil.
Example: 15 grams of Colorfil Resin divided by 5 = 3 grams of Colorfil Activator. Add 15 grams of Colorfil Resin + 3 grams of Colorfil Activator = 18 grams total weight or volume.

COLORFIL PROCEDURE

1. Allow the Colorfil Resin and the Colorfil Activator to come to room temperature approximately 70° F.

2. Clean the part to receive the color fill with Denatured Alcohol and Scrub Brush then blow image out completely using a hot air gun or air compressor.

3. Measure proper amounts of Colorfil Resin and Colorfil Activator into the paper cups provided.

Note: DO NOT mix batches larger than 4oz., because large amounts will activate too quickly. The larger the batch the faster it activates which could make it difficult to control leaving air bubbles trapped in the Colorfil. If your image is large, pour small measured portions of Colorfil Resin into a paper cups ahead of time and then add Colorfil Activator when you are ready to pour it into the image.
4. Pour pre-measured Colorfil Activator (see fig 4) into pre-measured Colorfil Resin.

5. Slowly rotate the paper cup containing the Colorfil mixture, while using the stir stick to gently scrape the material from the sides and bottom of the cup. Slowly and thoroughly mix the material. If the Colorfil is not completely mixed it will not activate properly. Take care not to add lots of air while mixing. **DO NOT use an electric mixer.**

6. Allow the cup of Colorfil material to rest a minute or two to allow air bubbles to rise to the top of the mixture and escape.

7. Pour the material in a puddle over the image. Use the stir stick as a spatula to generously spread color fill over the image. Remember, Colorfil will shrink so be sure to cover generously.

8. Use a Toothpick and trace around the image to help detach and release any trapped air bubbles in the image.

**Note:** The material when overfilled will allow the air bubbles to float above the finished surface level.

9. Use a Hot Air Gun or Hair Dryer on low setting, with direct downward heat, to thin and release air bubbles. Take care not to overheat the image, it can warp and crack. Alternate between different areas of the image with a hot air gun to aid in releasing the air bubbles.

10. Allow the Colorfil object to cure over night. Temperature and humidity both play a part in how long it takes Colorfil to cure. You may force dry in a conventional oven set no higher than 110°F taking precaution, as it can cause warping of the part. Once the part is warped you will not be able to flatten or correct the item.

**DO NOT** dispose of any remaining Colorfil until you have allowed it to cure. **POTENTIALLY EXTREME FIRE HAZARD COULD RESULT IF LIQUID MATERIAL IS PLACED IN A TRASH CONTAINER**
COLORFIL FINISHING

MATTE FINISH

STEP 1. Make sure to test the Colorfil to see if it is cured, by pressing your fingernail in the Colorfil. The Colorfil will not indent when Colorfil has cured.

STEP 2. Using a Random Orbital Sander and 150 grit abrasive begin to sand off the excess Colorfil. Note: DO NOT over sand. Leave a small amount to be removed on the next level of abrasive, until all grit levels have been achieved.

STEP 3. Use a sanding eraser to clean off the built up material on the abrasive disc. Continue to sand until most of the excess Colorfil is removed.

STEP 4. Change to 180 grit abrasive. Clean the image area using a white rag and spray bottle of water to thoroughly remove any dust and grit from the surface from the previous operation.

STEP 5. Repeat the process, sanding with 220 grit to remove the previous grits obvious scratch patterns. Remember to thoroughly wipe with a damp cloth to clean between each sanding step.

MATTE FINISH

COLORFIL FINISHING

HIGH GLOSS FINISH

STEP 6. For matte finish, use Maroon Scotch Brite Pad for buffing the surface.

Step 7. For high gloss finish omit step 6 and use 60 micron abrasive then 30 micron abrasive. Follow the same process as before.

Step 8. 30 micron abrasive tends to load up quickly so place a clean rag on the surface of the sander and carefully rotate sander to remove build up.

Step 9. Clean with damp cloth.

Note: Excessive pressure causes overheating which will load up the abrasive. Light pressure and frequent abrasive cleaning will speed up the process and require much less abrasive.
Step 11. If using a buffing wheel, load the wheel with buffing rouge or polishing compound.

Step 12. Hold the item firmly. Place image area against wheel to polish the image area.

Step 13. Use a progressive polish process and continue until the desired finish is obtained. The part begins to shine and reflect light easily in the finish. The surface will polish to a hard high gloss if processed correctly and will appear monolithic with the surrounding materials. If a haze appears in the finish repeat steps 7-14.

Note: Hand held buffer may be used for these steps.

Matte Finish

High Gloss Finish

DO NOT DISPOSE OF ANY REMAINING COLORFIL UNTIL YOU HAVE ALLOWED IT TO CURE. POTENTIALLY EXTREME FIRE HAZARD COULD RESULT IF LIQUID MATERIAL IS PLACED IN A TRASH CONTAINER. ONCE CURED AND HARDENED IT CAN BE DISPOSED OF IN A LANDFILL.