

Inlaid Plate with Epoxy Resin Inlay

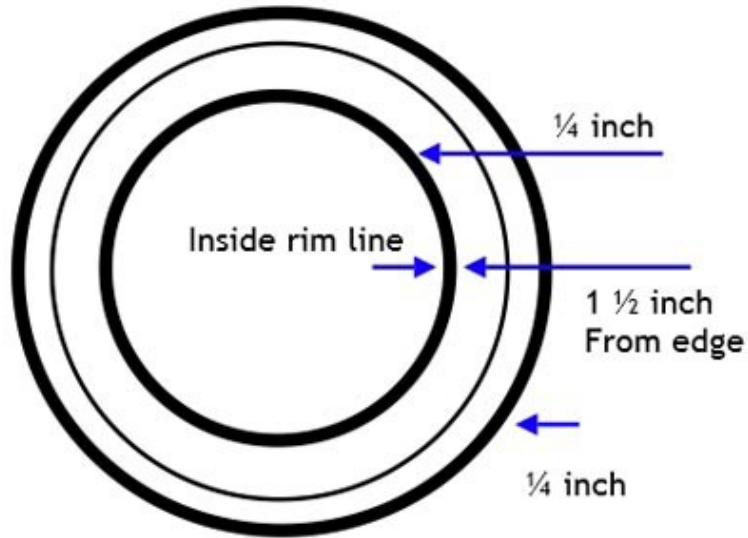
MATERIALS LIST

- Two inch thick plate blank turned to a disc. Diameter of choice.
- Bowl gouge.
- One inch or larger scraper to smooth surface prior to applying epoxy.
- Parting tool.
- Spur center.
- Live center.
- Scroll chuck.
- RAKA epoxy resin and hardener.
 - 2 parts resin to 1 part hardener.
 - Low viscosity epoxy resin 127
 - 350 non-blush epoxy hardener
- [RAKA epoxy kits](#)
- Fill or pigment of choice, seeds, metal flakes, pigment, dye, acrylic paint, etc.
- Sand paper.
- Finish of choice.

METHOD

1. Mount the disc blank on the lathe between centers. Want a good clear outline.
2. Turn the blank round and level both sides.
3. Select the side which will become the plate surface, typically the side with the best grain or features.
4. Turn a tenon for mounting in a scroll chuck on the side which was selected to be the bottom. Remove the blank from the lathe.
5. Mount the scroll chuck on the lathe then mount the blank. It is recommended to keep the blank on the lathe for the next steps since it is unlikely to be able to remount and have the blank remain true.
6. Re-turn the blank round and level on both sides as needed.
7. Smooth the plate surface and layout the edge and fill patterns.
 - a. For a 10 inch diameter plate, mark a line 1 ½ inches from the outer edge. This will be the inside rim of the plate bowl.

- b. Mark a line $\frac{1}{4}$ inch from the outside edge of the blank. This will be the outer rim of the fill area.
- c. Mark a line 1 inch from the line in b. above. This will be the fill area.



8. Turn the plates bowl portion approximately $\frac{1}{2}$ inch deep. Do not go past the inside rim line.
9. Using the scraper, establish a smooth curve from the rim line to the bowl bottom. Desire minimum tearout, but should not need to sand. Smooth helps to avoid any epoxy leaks penetrating into the wood.
10. Using the parting tool, turn a $\frac{5}{16}$ inch deep recess for the fill area.
11. Wrap the outer edge of the blank with masking tape. This will prevent the epoxy from staining the wood.
12. Remove the chuck and plate from the lathe, keeping the plate in the chuck. The rim edge is only $\frac{1}{4}$ inch wide, so if the plate is removed from the chuck and remounted, there is a good chance the plate will be out-of-round. There will not be sufficient material to correct any issues.
13. Place the chuck with plate on a level surface. Use a bubble level to ensure the plate surface is level. The epoxy is not very viscous and will run out of the recess if not level.

14. Fill the recess in the plate edge with the fill material of choice – without epoxy. Remove the fill. This will be a guide for the volume of epoxy which needs to be mixed.
15. Mix the required volume of epoxy using the ratio of resin to hardener as stated by the manufacturer in a container which is big enough for the epoxy and the fill volume. Mix the two components for the duration stated by the manufacturer. Mixing is important. If the components are not completely mixed, some areas may not cure.
16. Add the fill material to the mixed epoxy and mix for at least a minute.
17. Pour the epoxy/fill mixture into the recess and spread to be as even as possible. Let the epoxy set in the recess for 5 minutes to allow any bubbles to come to the surface.
18. Using a heat source, e.g., propane torch, hot air gun, carefully pass the heat source over the surface of the epoxy to eliminate the bubbles. If using a propane torch, you should **NOT** need to touch the flame to the surface, the heat of the flame should be sufficient.
19. Allow the epoxy to cure for the duration recommended by the manufacturer. Allowing more time is preferred such as at least one day, perhaps two.
20. Place the chuck with plate back on the lathe.
21. Remove the tape. Some pieces may be stuck. Turn the plate to its final depth and sand to final finish. Use newly sharpened tools to turn the plate to get the best finish. This will minimize tear-out of the fill material. Use very fine grit for the final finish on the epoxy. Bill goes up to 4000 grit Abralon.
22. Turn the bottom side of the plate to expose the epoxy inlay. Establish the plate bowl bottom shape, being very careful of the chuck jaws.
23. Remove the plate from the chuck and reverse mount it to finish the bottom of the plate using whatever method of reverse chucking you have available. Vacuum chuck works well, or may need to make a jam chuck. Sand to final grit.
24. Remove the plate from the chuck and apply the finish of choice.

