

# Copper With Character...

## A Guide to Veneering with Patinated Copper

Veneer  
Supplies.com

### Using TC-20 Copper Glue with a Vacuum Press

If you've used a vacuum press for wood veneering, you'll find that copper veneer works just like wood veneer. This is my preferred method of application. I'm definitely not a big fan of contact cement and the vacuum press has a tendency to leave a smoother surface on copper veneer.



Of course, the copper veneer is a bit fragile in its raw form so it must be handled gently. Nevertheless, it is a unique and intriguing material that will surely have family, friends, and customers lining up to get their hands on any project you create.

Keep in mind that the edges of the copper veneer can be quite sharp. Exercise care when handling this material to prevent injury. Wear gloves when handling this material. The copper color/patina is on the surface of the sheet so do not apply tape to the show side of the copper sheet as it will damage the surface when the tape is removed. Also note that sharp bends and creases can cause the coloring to come loose.

Copper veneering requires no significant investment in tools or machinery. A few basic tools are all you need.

- Wood, Rubber, or Polyurethane Roller
- 12" x 12" Piece of 30 Gauge Vinyl
- Vacuum Press
- TC-20™ Copper Adhesive
- Substrate Board (Plywood, MDF, Particle Board)

### Smooth It Out

Copper veneer is rolled onto a cardboard tube for shipping to protect it during transit, but it's possible that your copper will have a small crease in one or two areas. This is normal and easily repaired with a wood, rubber, or polyurethane roller and a piece of 30 mil vinyl.

To remove a crease, set the copper on a clean and smooth surface. Then place a piece of vinyl material over the blemish and use the roller to flatten the wrinkle. Flip the copper sheet over, set the vinyl in place, and then roll the back side as well. A few passes will do the trick!



Copper Crease



Roll It Out



Crease Fixed!

## Vacuum Pressing a Copper Veneer

1. The TC-20 adhesive will bond to most porous substrates such as plywood, particle board and MDF. Begin by cutting the substrate 1/4" wider and longer than what is required for the project. This will give you room to trim the panel and get the edges perfect.
2. Now use scissors to cut the copper veneer sheet to the same size at the substrate.
3. Creases and wrinkles in the copper sheet are not uncommon. Luckily these are easy to remove. Simply place a small square of vinyl material over the crease and use a wood roller to press out the wrinkles. Be certain that the area under the copper veneer is free of any dust or debris which will add reverse-dimples and other markings to the copper surface.
4. This step is critical! Place the veneer face down on a smooth, clean surface. Gently scuff-sand the back of the copper veneer with 80 or 120 grit sandpaper. Be sure to scuff all parts that are to be bonded (especially corners and edges).  
  
Wear gloves while doing this to prevent any chemical residue from contacting your skin.
5. Thoroughly clean the back side of the copper veneer with water and a steel wool or synthetic wool pad. Be certain to wear gloves while doing this to prevent any chemical residue from contact your skin. Wipe off any residue.
6. Scuff-sand the substrate with 80 or 120 grit sandpaper to ensure a perfect bond.
7. The minimum use temperature for the TC-20 adhesive is 65°F. Using a glue roller, apply the glue to the substrate. Do not apply it to the copper veneer. A thin coat of glue is generally sufficient.
8. Place the copper veneer onto the substrate. To prevent shifting, tape the copper veneer to the edge of the substrate. Be sure to use blue masking tape. Regular masking tape will be hard to remove after pressing the panel.
9. If you are using a vacuum press, place the panel in the vacuum bag and clamp it shut. Allow the press to run for 45 minutes before removing the panel. The ideal vacuum level for pressing copper is 15" of Hg, but always do a test panel to be certain.
10. If you opt to use a different clamping method, be sure to apply evenly distributed pressure to the entire panel surface. Allow the panel to cure for 45 minutes before unclamping.



Scissor Trimming



Crease Repair



Spread the Glue



Vacuum Pressing

## **IMPORTANT**

You'll notice that the bond is very weak when the panel is first removed from the press. Curing takes a minimum of 90 minutes outside of the press but allow 24 hours for a full bond especially if you are machining the panel.

## **Trimming Copper Veneer**

Since the copper is thin, the edges can be trimmed with a table saw or miter saw equipped with a sharp blade with at least 55 teeth. A router with a flush trimming bit works nicely as well. Do not use a veneer saw to trim the copper.

## **Adding Flash to Pizzazz**

Most of the copper veneers have a dull sheen which somewhat subdues the colors and patterns. Though the patina is permanent and will not rub off, a good coat of paste wax will bring out the best in the copper and protect it as well. Carnauba based car wax works quite well but any wax will work as long as it doesn't have "cleaner" or polishing agents in it.

Most of the copper veneers are available with a wax finish, a lacquer finish, or no finish at all. There are some patina/color types which do not have a wax finish option simply because the colorant on the copper sheet requires lacquer to "lock in" the pattern.

The wax finish often has slightly dull sheen and gives the copper a more organic appearance. A good coat of paste wax will bring out the best in the copper and protect it as well. Carnauba based car wax works quite well but any wax will work as long as it doesn't have "cleaner" or polishing agents in it. The wax finish option should only be ordered for your copper veneer if you have no plans to further protect the finish other than with additional coats of wax.

The lacquer finish is glossy and can change the vibrance of certain patina colors. The high gloss nature of the lacquer finish can allow scratches to be more visible, but a coat of furniture-grade paste wax will help protect the lacquered copper from mild abrasion. It's also important to note that cracking and crazing can occur on lacquer copper veneers if the sheet is bent to a tight radius.

Better protection is needed if you are using the copper veneer for table tops and shelving. To increase the durability of a lacquered copper sheet you can apply another coat of standard lacquer (available at most hardware stores) but always test it on a scrap piece of similar copper first.

The ideal protective coating for bar top and counter tops is poured-on epoxy. Many hardware stores carry this type of finish. Be aware that poured-on epoxy finishes will not stick to a waxed copper veneer.

**Learn more about copper veneer here...**

<https://www.joewoodworker.com/veneering/faq-copper.htm>