

GILDING WITH KOLNER INSTA-CLAY & KOLNER BURNISHING CLAY



By Lauren Sepp

I've been asked many times, "is there an easier, improved way to water gild and burnish a surface?" It's generally agreed that traditional water gilding is a lot of work. One must prep the wood, apply a coat of glue, apply 6-8 coats of gesso at the proper time, and sand the hard gesso while the white dust fills your shop. As if that's not enough you have to apply 3-4 coats of bole and sand it smooth as well. After applying the leaf, you pray that you get a good burnish, not to mention the fact that if your recipe is not just right you may end up with cracking, a scratchy burnish, leaf not sticking to the surface correctly, and potentially a number of other problems associated with the technique.

Our friends at Kolner Products in Germany formulated a water based single layer burnishable gilders' clay for water gilding back in 1985 called "[Kolner Burnishing Clay](#)". This product combines and replaces the glue size, gesso, and bole layers with just one product. The clay is premixed with an acrylic binder and only needs to be thinned slightly and stirred. There is no heating, dissolving of glues, or straining. There is even a sprayable version called "[Insta-clay](#)" for the commercial gilding industry. [Kolner Burnishing Clay](#) has also found a respected place in the conservation field because it can be applied over any nonporous substrate and is reversible with acetone. [Kolner Burnishing Clay](#) and [Insta-clay](#) are available in several traditional bole colors: red, yellow, white, black, and blue ([Kolner Burnishing Clay](#) only). All colors can be mixed together to achieve different shades. The white Burnishing Clay can be tinted with "[Mixol](#)" tinting agents up to 5% by weight to achieve any color you desire.

Kolner Products was established in Cologne Germany in 1979 and now makes its home in Dresden Germany. Kolner is recognized for their innovative water-based adhesives for gold leaf. Kolner has a full range of water-based products that includes gilding adhesives for metal leaf, gilding on stone, paper and ceramics, as well as traditional products like gilders' clay, oil size and gilding tools. All Kolner products are available exclusively in the U.S. through SeppLeaf Products.

[Kolner Burnishing Clay](#) and [Kolner Insta-clay](#) can be applied to many different surfaces. Certain non-porous substrates require no sealing before application of the clay: Plexiglas and other plastics, sealed woods, nonporous paints, and lacquered metals. Unsealed metals may require a primer. Smooth plastics and metals may require a light sanding to promote good adhesion. For porous surfaces such as matte board, paper, parchment, raw wood, textiles, unglazed ceramics, stone, plaster, traditional gesso and compo ornaments require a sealer before applying the [Kolner clays](#). In many applications shellac is a good all-around sealer. Always test for compatibility. Do not use [Kolner Burnishing Clay](#) over traditional water gilding without first applying a barrier coat of shellac, as the systems are incompatible over time.

Just as in traditional water gilding, you apply [yellow burnishing clay](#) first and then [red burnishing clay](#) over the yellow for areas you wish to burnish.

LET'S GO OVER EACH STEP IN DETAIL

1. All surfaces should be smooth, clean and free from dirt, dust, and grease. Prime surface if necessary and let dry. In our sample I've primed the wood sample with shellac.
2. Apply the clay at room temperature. Stir the clay gently to avoid creating air bubbles. Decant the amount of clay you plan to use immediately. Clay should be thinned slightly with water: 7-8% by volume for [Burnishing Clay](#) and 10% by volume for [Insta-clay](#). For [Burnishing Clay](#), a 100 ml bottle needs about .25 oz. added water, a 500 ml bottle need 1.25 oz water, and the liter requires 2.5 oz water.



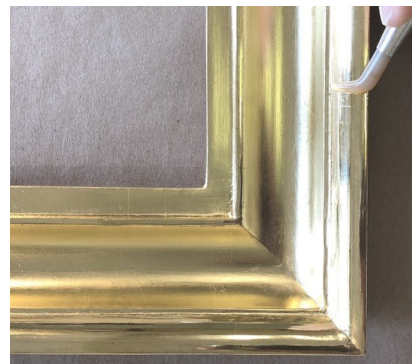
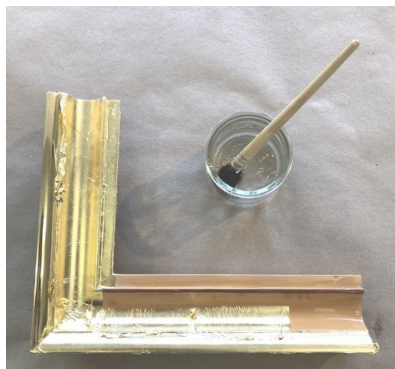
3. Use a soft [natural hair brush](#) to apply the clay in long, flowing strokes in one direction. Allow each layer to dry thoroughly before the next coat is applied. The average drying time is about ½-1 hour depending on ambient humidity. The color lightens and is matte when dry. Apply a minimum of 3 coats. If you are using [Insta-clay](#), spray the first coat on thickly enough to achieve a uniform film covering the entire surface. A low pressure high volume sprayer with a nozzle opening of approximately 1.5 mm is recommended. Apply 2-3 coats, waiting about ½ hour between coats. To apply a different color clay for burnished areas, it's best to apply the [Insta-clay](#) with a brush; 1-2 coats will do.
4. After applying the [Kolner Burnishing Clay](#), you will need to sand the surface to remove any brush strokes. Where raised grain or drips are visible, sanding is recommended to smooth the surface between coats. Typically, after spraying [Kolner Insta-clay](#), no sanding is required between coats. After the clay is fully dry it's time to sand the surface smooth. You can use a wet or dry method:

For **dry** sanding, smooth the surface starting with 320 grit aluminum oxide sandpaper and finish with 600 or 800 grit. Polish the clay with [0000 Liberon steel wool](#) or a [horsehair cloth](#).

For **wet** sanding, which I prefer because it's faster and produces less dust, smooth the surface with 320 wet/dry silicon carbide paper and finish with 600-800 grit, dipping your sand paper in a little water as you move along. Wipe off the slurry with a cloth and avoid puddling of water. When the surface is dry, polish the clay with [0000 Liberon steel wool](#) or a [horsehair cloth](#). You can also rub the surface with a little ethanol or denatured alcohol until the surface is smooth.

Then rub the surface with a [dry lint-free cotton cloth](#). Allow the surface to dry for at least ½ hour before proceeding.

- Now you are ready to prepare your gilders' liquor for gilding. [Kolner makes a glue concentrate called "Colnasize"](#). It's a liquid fish-based glue developed for [Kolner clays](#). It comes in a handy squeeze bottle (keep refrigerated). Dissolve 1 teaspoon of [Colnasize](#) in 2 cups of lukewarm distilled water. Depending on climate conditions, such as low humidity, you may require a stronger concentration. If your leaf is not sticking to the surface well, then you can increase the [Colnasize](#) up to 2 teaspoons per 2 cups of warm water. Always test concentrations until you are satisfied with the results before starting your project.
- Let's start laying leaf. Gilding with [Kolner Burnishing clay/Insta-clay](#) is similar to traditional water gilding except that the clay wets less readily than traditional gesso and bole. Apply the first coat of liquor by flooding your surface. If you have any surface tension, you may add up to 10% denatured alcohol to the liquor solution. When the first coat is dry, repeat 2-3 times to wet the surface completely. After applying the third coat to the surface, while maintaining complete saturation, lay your leaf onto the surface. Apply the leaf rapidly while the surface is still wet. If there is no liquor on the clay, the leaf will not stick. Continue gilding until the surface is covered. If necessary, patch any "holidays" by applying liquor with a [small brush](#) to the surface and immediately laying a small piece of leaf.



- Depending on temperature and humidity, wait at least 1 ½ hours before testing to see if the surface is ready to burnish. Best results are usually obtained when the surface is burnished within 24 hours. Burnishing is a magical, yet sensitive technique that requires careful observation and practice. This method involves applying gentle pressure with an [agate burnisher](#) in a polishing motion, which compresses the gold and the clay layers. You are aiming for a mirror like reflection. If you try to burnish too soon, the leaf will pull from the clay, and or will have a dull appearance. If you wait too long the leaf will scratch. For my sample I waited about 2 hours before burnishing. [Kolner clays](#) burnish beautifully with minimal pressure applied to the [agate stone burnisher](#).
- Wait until the following day before rubbing or sealing the surface. Seal the gilding with a solvent-based topcoat, such as [DUX Acrylic Topcoat](#), for protection and toning purposes.

Some practice may be needed to master [Kolner Burnishing Clay and Insta-clay](#), but after a few test pieces you will enjoy the benefits of traditional water gilding without dealing with soaking rabbit skin glue, and all those layers of gesso and bole to heat up and apply. You can use all that freed up time to have fun learning the diverse ways you can add patinas and special antiquing finishes to your gilding!

This SeppLeaf Technical Guide and others may be found online at

http://seppleaf.com/technical_help

If you have questions or need clarification, please contact our knowledgeable staff via that link.

Products used in this Technical Guide

Kolner Burnishing Clay

<http://seppleaf.com/search?q=kolner+burnishing+clay>

Kolner Insta-Clay

<http://seppleaf.com/search?q=kolner+insta-clay>

Agate Stone Burnishers

<http://seppleaf.com/search?q=agate>

Cotton cloth

<http://seppleaf.com/search?q=cotton+cloth>

Horsehair brush

<http://seppleaf.com/search?q=horsehair>

Natural hair brush

<http://seppleaf.com/search?q=natural+hair+brush>

DUX Acrylic Topcoat

<http://seppleaf.com/search?q=dux+acrylic+topcoat>

Colnsize glue concentrate

<http://seppleaf.com/search?q=colnsize>

Liberon Steel Wool

<https://www.rockler.com/liberon-steel-wool-0000-steel-wool>

Manufacturers whose products are distributed by SeppLeaf Products

Liberon Wood Finishing Products

<http://seppleaf.com/liberon>

MIXOL Universal Tint Products

<http://seppleaf.com/mixol>

DUX topcoat

<http://seppleaf.com/products/bybrand/dux>

Max Fritsch Stone Agate Tools

http://seppleaf.com/products/bybrand/max_fritsch