**Charles Douglas Gilding Studio**

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***Gold Leaf Gilding: Reverse Glass Gilding/Verre Églomisé***

**GELATIN SIZE**

**Ingredients (for Gold Leaf):**

**250 ML Distilled Water**

**2 Sheet 'Diamonds'**

**Ingredients (for regular weight Genuine Silver, Palladium, and other heavy weight leafs):**

**200 ML Distilled Water**

**2 Sheet 'Diamonds'**

*(Note less gelatin equals a weaker size, or adhesive, resulting in a brighter gild but less adhesion. Likewise, a stronger size – more gelatin diamonds – will provide stronger adhesion with a less bright gild, depending upon the strength. Stronger adhesion may also result in a ‘cloudy’ gild. The ratio offered here strives for a balance between brightness and adhesion. Bear in mind, however, that gold leaf is thinner and with less weight than the silver or palladium leasf so the weaker size for gold is still sufficient for good retention.)*

**Heating the Gelatin in a small Crock Pot, Pan of Water, or Bain Marie**

Measure the desired amount of cold, distilled water as shown above by weight as grams. Place a small amount of this water in the bottom of a plastic cup with the gelatin diamonds, covering the gelatin enough to allow it to soften (approximately 15 minutes) before heating. Stir occasionally to keep the gelatin from sticking to the sides of the container.

Heat a pan or small crock pot of water until it’s very hot. If using a pan, remove from the heat. Place the cup and the softened gelatin into the hot water bath to allow the gelatin to completely dissolve, stirring it in the cup until completely dissolved and remove from the water bath. DO NOT BOIL the gelatin as this will damage the adhesive quality of the gelatin size. Immediately add the remainder of the 200/250 ML/grams of cold water

If heating the gelatin in a Bain-Marie (double boiler) the gelatin may be heated in the top portion which sits on top of the hot water allowing the steam to heat the top of the Bain-Marie containing the gelatin.

**Heating the Gelatin while on On-Site Jobs**

Heat the gelatin size as shown above but in clean tin cup and heat over a can of sterno. As another option, you may also heat the entire 200/250 ML of water and Gelatin in a cup of water using a small, portable electric water heater that is immersed directly into the size water. This type of heater is sold in hardware stores with a clip that attaches to the inside of the cup. Simply hold the heater in the water while slowly stirring the gelatin away from the hot metal prong. This method is effective, just be careful not to burn the gelatin.

***Note:*** *Heating the gelatin in a double boiler is the gentlest method of preparing gelatin size. The size should be used cold; it should not be re-heated nor used past the first day. Four Hours is a good rule of thumb for shelf life.*

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***Gold Leaf Gilding: Reverse Glass Gilding/Verre Églomisé***

**Cleaning the Glass**

For the use in Verre Églomisé, or reverse glass gilding, the side of the glass to be gilded must be very clean to allow proper bonding between the leaf and glass. Signletterers have used this technique of gilding on glass for many years for business logos and other lettering whereby the gold would be backup up by hand, painted in oils.

Until recent years, pharmaceutical capsules were used to prepare the gelatin size for the adhesive and Bon Ami in cake form would be used to clean the glass. Today, a baker’s-style gelatin has replaced the gelatin capsules and Bon Ami no longer manufactures the cleansing bar; however, Bon Ami does still sell this original formula in powdered form in a Red Colored container called 1860 Original Formula which is used for cleaning glass (it should not be confused with their contemporary Bon Ami product which is in a gold colored canister as it could scratch the glass). As an alternative, a paste made of whiting (another term for *calcium carbonate*) and water may be used instead. The 1860 Bon Ami is my preferred cleaner due to the gentle abrasive quality of the feldspar particles but the product may be more difficult to find than the whiting.

First, give the glass a preliminary cleaning with household spray glass cleaner, drying the glass with a soft paper towel or 100% cotton, preferably soft, pharmaceutical grade. Follow this with making a paste of whiting (or the Bon Ami 1860 powder) and distilled water, cleaning the glass with swirling round strokes while moving your hand from left to right. Allow the paste to dry then wipe the dried paste off with fresh, soft cotton. Repeat the paste cleansing until the dried paste film is removed easily, removing any grime or silicone which can be found on new glass. If the paste is somewhat hard to remove it’s an indication that the glass is not yet clean and the paste method should be used again. At least two cleanings with the paste should be performed.

Once the paste is easily removed make sure that no powder remains on the glass such as along the edges of glass panels, otherwise, it may become mixed with the gelatin size ruining your gild. A little isopropyl alcohol on soft cotton may be used to remove any remaining particles of dried powder, being mindful of any sharp edges along the glass panels (rubber gloves are recommended).

***Note: KEEP GELATIN SHEETS IN A TIGHTLY CLOSED GLASS JAR WHEN NOT IN USE.***

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***Gold Leaf Gilding: Reverse Glass Gilding/Verre Églomisé***

**Gilding the Glass**

When gilding a panel of glass it is best to position the glass vertically so the gelatin size will flow under the leaf. An artist easel may be used or any such prop that will balance the glass vertically, or at a tilt facing you. Glass can be gilded horizontally although a tilt, if not vertical placement, is preferable. When gilding a large sheet of glass where standing vertical is not possible, place the glass horizontally on your worktable and tilt the glass edge in front of you so the water flows down towards the table. After several layers of gilding left to right, turn the panel 180 degrees and tilt the glass towards you and continue gilding left to right below the previously laid leaf. This will prevent you from overstretching your arm.

Using a large, soft Squirrel or Camel hair brush, saturate the clean glass with the distilled water gelatin size covering the entire area, or relatively so if the glass is very large. Work the size and brush into the glass numerous times to break any initial surface tension.

After flowing several coats of size over the glass apply the leaf so it will be placed on a thin layer of fluid water, overlapping each leaf about 1/8th inch. Continue to lay each leaf left to right, top to bottom until the entire panel of glass has been gilded. In a similar fashion, the front portion of any glass, such as a candle vase or votive, may also be gilded.

Once the leaf has dried you will notice the leaf tone has changed from satin when wet to bright when dry. You may now brush off the excess leaf gently with a piece of cotton or dry, squirrel-hair mop and then use the cotton in a light, swirling fashion to smooth the gilding while also ‘ironing-out’ the ‘crinkly’ veining with the cotton going along the length of the crinkle which ordinarily will then blend into the gilded finish.

There will likely be areas where the leaf did not adhere or where there are fine breaks in the leaf. These are known as holidays or faults. These may be covered by way of spot gilding, gilding the spots that were missed or damaged. Simply use a small mop and small pieces of leaf picked up with a very small brush to wet the area and apply the leaf to these areas individually. However, it is often more effective and pleasant looking to double gild the entire panel if the spots to be gilded are excessive. This can leave a nice gild without running the risk of creating the shadows of small sections of leaf sometimes created by spot gilding.

When the final leafing is dry, buff the second gild/spot gild with your soft cotton. The gilded panel or other glass surface is now ready for a variety of treatment techniques, whether simply backing up with black oil paint (e.g. one shot or Japan Paint) for creating mirrors, abrading, etching, or reverse handlettering. Ultimately, the leaf will need to be protected, especially if any leaf used contains silver. A front gilded surface may be clear lacquered while reverse gilded glass panels are generally back-painted with a black oil paint.