

HOW-TO: GILDING SIZES

By Lauren Sepp

Mordant gilding—or, as it is more commonly known, oil gilding—is a technique in which genuine or imitation leaf is adhered to a surface with an adhesive, or “size.” As the name implies, size was traditionally an oil varnish consisting of linseed oil, resins, and a dryer.

Oil size is available in a quick version—which sets up, or “comes to tack,” in one to three hours—and a slow version, which comes to tack in about 12 hours, depending on the brand and environmental factors like temperature and humidity. The “open time” (the amount of time you have to apply leaf before the size dries) is roughly the same amount of time it takes for the size to come to tack. For example, if a size comes to tack in an hour, you will have about an hour of gilding time before the size dries.

One of the benefits of slow oil size is that since it spends time settling out, it gilds brighter than quick size. It is also recommended for exterior projects. Some quick oil sizes cannot be used for exterior projects; check the manufacturer’s label. Quick size is good for small projects or projects that need to be finished quickly. The only disadvantage to oil size is it cannot be burnished with an agate stone like traditional water gilding. However, the sheen of your gilding can be altered by how you prepare your surface. The shinier the surface, the brighter the gild; duller surfaces produce duller-looking gilding.

Today you will also find water-based sizes made of acrylic copolymers and drying additives. Most water-based sizes set up in about 15-30 minutes and remain open indefinitely. Water-based size’s strong tack makes it ideal for imitation leaf, but it can also be used with genuine leaf. Also, most water-based sizes are only for interior gilding projects. Water-based size sets up quickly without leveling out much, hence it won’t gild as brightly. This size should



● Understanding the various types of sizes used in mordant, or oil, gilding is key to getting the finish you want on your frame.

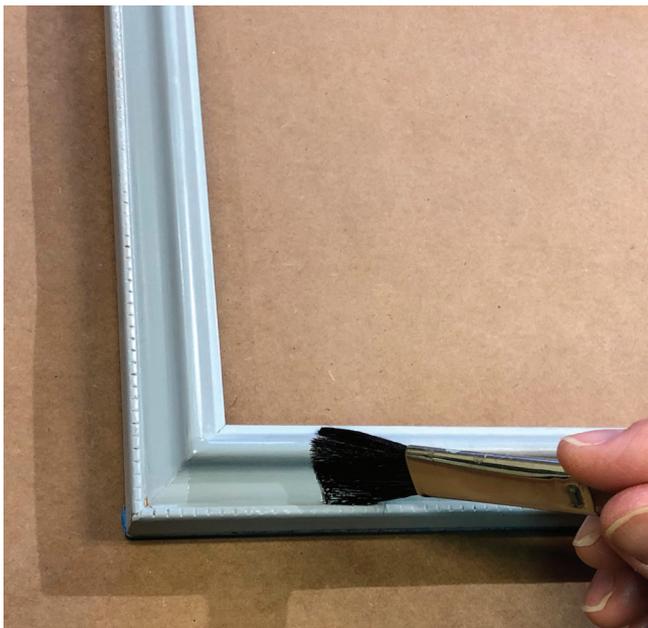
not be confused with “water gilding,” which uses gesso and bole made from rabbit skin glue.

APPLYING SIZE

Let’s go over how to prepare your surface and apply gilding size. To begin with, you want to work in a clean, dust-free environment. Apply your size to a non-porous surface. If you are using oil-based size, you should use an oil primer/paint or shellac. For water-based size, you should use a water-based primer/paint or shellac. Remember, any imperfections in the surface, such as brush marks, dust, etc., will be greatly exaggerated after the leaf is applied. Take the time to make your surface as smooth as possible. After your primer is properly prepared, it’s time to apply your size.

All sizes can be applied by brush, roller, or sprayer. You want to apply the size as thinly and evenly as possible. Avoid pooling in corners and creases. For water-based size, which sets up quickly, it’s important not to over brush the size as it will leave brush strokes. When the size reaches the proper tack, you are ready to gild.

Knowing when you have a proper tack takes a little practice. As the oil size begins to dry, it becomes tacky. Tack is the sticky condition of varnish that is no longer wet and cannot be smeared but is not yet completely dry. The proper time to apply the gold leaf is when the size is almost dry.



● Size can be applied by brush, as shown here, or by roller or sprayer. When it reaches tack, you are ready to gild.

The open time is dependent upon relative humidity and temperature. If the size is too dry, the gold will not stick. If the size is too tacky, the gold will appear dull or have a drowned look. Determining the proper tack is a matter of judgement and a gilder's experience. Usually, in a moist, cool atmosphere, the size will take a long time to set up.

Conversely, if the weather conditions are hot and dry, the proper tack will be rapid.

Take care to periodically check the tack with the hairs on the back of your hand. If there is a slight pull, the tack is ready. However, if there is a definite tug and/or residue comes off on your skin, it is still too wet, and you must wait. Another technique experienced gilders use to check tack is to draw a bent knuckle across the surface, which will produce a squeaking noise. If this procedure is done too soon, the surface can be damaged, so be careful!

Once you have proper tack, you are ready to gild. Leaf is available in basically three forms: loose leaf, transfer/patent leaf, and rolls. It is extremely thin and must be handled with exceptional care. For the beginner, patent leaf or rolls are easier to apply. Gold is pressed onto a thin, white tissue during the final stages of the gold beating process, and all that is required to apply it is to pick up the edges of the tissue and place it face-down onto the sized surface. Rub the back of the tissue with a clean cotton ball or the side of your hand and the leaf will transfer to the surface.

For loose leaf, you need to pick up the leaf with a special brush called a gilders tip. Be sure to overlap the leaf ($\frac{1}{8}$ ") to avoid any holes, or "holidays," in the gilded surface.

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● You can buy gold in three forms: loose leaf, patent leaf, and rolls. The latter two are easier for beginners.

Loose pieces may be dusted off with a soft brush or piece of cotton wool. Be careful not to brush too vigorously over the freshly gilded surface, as this may scratch the gold. When you are finished gilding, it's best to wait until the size cures before top-coating. Most quick oil sizes can be sealed in 1-5 days. For slow oil size, it's best to wait 3-30 days before top-coating, depending on which size you choose. For water-based size, it's best to wait two to three days before top-coating.

NEW SIZE AVAILABLE

It's been some time since we've had any major news about oil size. Over the past decade, significant changes for gilding adhesives include the re-formulation of LeFranc and Bourgeois' 12-hour oil size, and the introduction of Dux quick and oil-based sizes, which function like Rolco sizes.

It's with excitement that we announce a gilding size we are now bringing to the US market. This size is produced in Italy for Giusto Manetti Battiloro of Florence. Manetti's oil size was formulated in 2001 to match the strict quality standards Manetti applies to its gold leaf. Manetti oil size

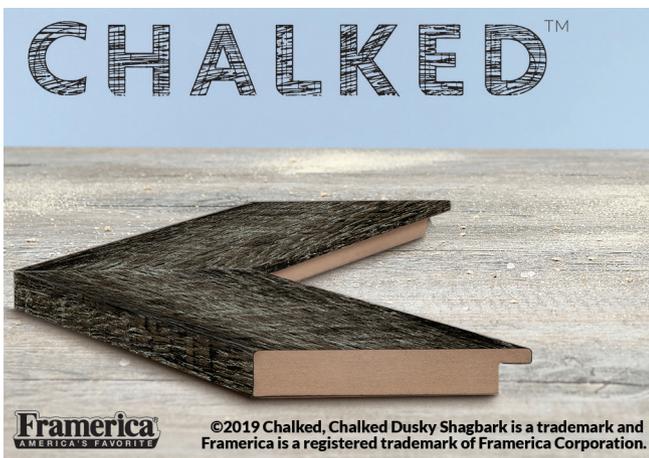
is available in three-hour and 12-hour formulas. These are made from a combination of high-quality resins and turpentine that flows out well and levels nicely.

Manetti's 12-hour size has been used in several noteworthy outdoor projects. In 2016, this 12-hour size was used by Carolina Izzo on the multi-karat ceiling of the Bishop Selwyn Chapel of the Holy Trinity Cathedral in Auckland, New Zealand. In 2017, master gilder Michael Kramer of The Gilders' Studio Inc. used the 12-hour size on several large exterior fiberglass lions for the MGM Hotel and Casino in Cotai, China. Kramer had accelerated testing conducted on the Manetti 12-hour size to make sure it would last over time and meet his stringent requirements. Kramer said the Manetti 12-hour size held up extremely well during testing. In his opinion, performance-wise, "it's like the old LeFranc 12-hour size." When properly applied, both produce a radiant gilded finish.

Both sizes should be stirred to combine all components. The three-hour and 12-hour sizes can be combined to achieve intermediate tack times and open gilding times. Both sizes can be used for interior and exterior projects.



● Leaf is extremely thin; it's important to apply it carefully, taking your time to overlap and avoid any gaps on the frame.



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The size works well over shellac, oil primers, zinc chromate primer, and epoxy paint. Manetti oil size can be thinned up to 20-30 percent by volume with turpentine on interior projects. For exterior projects, use the size at package consistency. You can apply the size by brush, roller, or spray with a high-volume, low-pressure (HVLP) spray gun. Ideal conditions for application are 65-75 de-

grees Fahrenheit and 40-60 percent relative humidity. Do not apply size under 60 degrees Fahrenheit.

Manetti 3-Hour Size reaches tack in two to three hours and will remain open for two to three hours depending on dilution, temperature, and humidity. For exterior gilding, the size can come to tack in less than an hour on warm, sunny days. Allow the gilded surface to cure for a minimum



● Brush any loose pieces of leaf off gently with a soft brush or cotton wool.

of three to five days, depending on how much you thin the size before top-coating.

Manetti 12-Hour Size reaches tack in 12-18 hours and will remain open for about 8-12 hours, depending on dilution, temperature, and humidity. For exterior gilding projects, the size can come to tack in as little as two to three hours on warm, sunny days. Allow the surface to cure for a minimum of five to eight days, depending on how much you thin the size before top-coating. Do not top coat exterior gilding. Store size in a cool, dry place in tightly sealed original packaging.

The percentage of dilution and method of application can significantly affect the working time. Always test substrates, primers, and topcoats to be used with the size before starting your project. **PFM**



Lauren Sepp

Lauren, who is Vice President of Sepp Leaf Products, is the third generation in her family business which specializes in gilding products for the trade. After receiving her B.S. in Merchandising from the University of Delaware, Lauren joined the company in New York City, where it has served as a local and international resource for gold leaf and related materials for over five decades. She enjoys bringing traditional and innovative products to market, and helping picture framers around the world create beauty with gold leaf.

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