

Tiffany Technique Jewelry Tutorial

Just what is the Tiffany Technique? Also known as the Tiffany Method or “soft soldering,” it’s a technique that has been used for centuries by stained glass artists, but that was brought out of cathedrals and into many people’s homes near the end of the 19th century.

Louis Comfort Tiffany was obsessed with the incredible stained glass windows he saw in churches and cathedrals. He developed a line of lamps – and later, jewelry – using the old technique of adhering copper foil to glass and soldering the glass together into gorgeous designs.

These days, the “Tiffany technique” mostly refers to soft-soldered jewelry that’s made with lead-free, silver-bearing solders. It can be used on glass, stone, and many other materials that can withstand around 450-degrees, making it an excellent choice for home-based jewelers who may not have the space for a torch set-up. All a soft solderer needs is a good soldering iron and a few basic, inexpensive supplies.

Short list of supplies:

Ceramic, stone tile or other heat-proof surface to work on
Soldering iron and stand
Flux (gel, paste or liquid)
Natural, stiff-bristle brush with wood handle
Tip tinner
Fine steel wool
Damp cellulose (vegetable fiber) sponges
Needle-nose pliers
Rubbing alcohol and microfiber towel
Baking soda
Dish soap
Old toothbrush
Optional: third hand (this is unnecessary but makes life a whole lot easier for positioning)
Optional: Pennybrite if using copper metal

For the jewelry itself:

Silver-bearing soft solder, like Silvergleem
Copper tape (the kind used to make stained glass)
A stone or crystal of your choosing – choose wisely based on hardness
Jump rings
Optional: copper wire (anything between 18-22 gauge is good to keep around)

**Note: If you’re going to be working with solder habitually, or making multiple pieces to sell, it’s a good idea to invest in a vapor mask or small fume extractor (both are reasonably priced on Amazon). Soldering does give off VOCs, which can irritate your airways. Check out [this article](#) on soldering safety. Otherwise, work in a well-ventilated area if you’re just starting out (keep a window open and have a fan going).*

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Process:

Use the microfiber cloth to clean each stone thoroughly with rubbing alcohol. You want to make sure there's no residue or oil from your fingers – this assures you'll get a good bond with the copper tape!

Loop the copper tape around your stone to get an idea of how long it should be – then tear it about an inch longer than you think it needs to be, just to be safe.

Peel the backing off the tape and position it so that the center of the tape lies along the very-most pointed edge of the stone.

Starting at the bottom, wrap all around the edge of the stone, keeping a firm hold and making sure there's no slack. Once you've gone all the way around, overlap the edges by about ¼”.

Use your fingers or the wood handle of the paintbrush to collapse the tape so that it's flush along the face and back of the stone.

Press as hard as you can so it's flush and then burnish with the wood handle of your paintbrush, rubbing firmly so that the copper tape settles down nicely. It should look smooth, with any wrinkles rubbed firmly until they're almost unnoticeable. This step assures you'll have a secure foundation that won't have your stone knocking around later.

It's time to solder! Have you tinned your iron? Once your iron's all tinned, if you haven't already, plug it in and let it heat up while you add some flux. It only takes a minute or two to get to full temp.

Pull a tail of about 4” of solder from the roll, so that you can pull from it as you work.

Use your paintbrush to add some flux all over the copper tape. Don't go overboard – just enough that the tape is covered.

Now, you can either hold the stone with your needle-nose pliers or wedge it in between two damp cellulose sponges. Damp sponges work really well to pull heat away from your piece as you work it. You want the heat to stay in a localized area for the solder to flow, but you also want it to cool as soon as possible so you don't tire out the adhesive on the copper tape.

Now, pick up some solder with your iron – you'll want to hold the soldering iron tip below the tail of solder and drag upward to load it.

Once your tip is loaded, touch it to the flux-covered copper tape – the solder should start flowing. It's so exciting!!

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Use the tip of your iron to pull solder around so that it completely covers the copper tape, reloading with more solder when you need it. A really great way to add the solder is by holding your tip slightly above the tape, kind of hovering so that a generous amount of solder flows, creating a kind of domed effect over the tape. The more solder you can load on here, the stronger your final piece.

If you'd like, try coating the entire piece of tape first, then go back to build up more thickness. This takes practice – don't be discouraged if you can't get it on the first try. Once you do it a few times, I promise it'll be like second nature for you.

Every so often, you'll want to wipe your tip clean with the piece of steel wool, and recondition the tip with the tip tinner. If you notice that the solder isn't sticking to your tip as well when you try to load it, it's time to use some tip tinner. Eventually, you'll want to keep a block of sal ammoniac near your work station for this purpose, but it's not necessary when you're just learning *as long as you have tip tinner*.

Once all the copper is completely covered with solder, it's time to add your jump link! At this point, position your stone, top up, between the two damp sponges. Now grab a jump link with your needle-nose pliers, making sure the open end is facing out – you'll want to trap the open part in your solder when you fuse it to your piece.

Now position the jump link as pictured – you'll want the circle of the ring to sit atop the stone so that the left of the circle is at the front of the stone, and the right of the circle toward the back. This is so you can easily string a chain in the piece and always have it hang facing forward on the neck.

Add lots of flux to the open part of the jump ring and to the top of the soldered stone. Load your soldering iron tip, hold the ring in place and quickly touch the tip to your piece to fuse the jump ring to the soldered stone. Hold the ring very still until the solder cools – just a couple seconds will do it.

Flux is an acid, so you want to neutralize that acid as soon as you're finished with your piece. Mix about 2 tablespoons of baking soda in a cup or two of water, and swish your piece around, scrubbing it gently with the old toothbrush.

Now put a little dollop of dish soap in your hand, and lightly scrub your piece under the tap with the sudsy water. You want all traces of the flux to be gone. Wipe off your piece with a dry part of that microfiber towel and let it air-dry.

You may choose to add patina at this point to change the finish, and/or seal your piece with artist's wax or all-natural beeswax.

References:

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SoftSoldering.com – lots of info and best place to start for beginners

<http://softsoldering.com/tiffany-technique-jewelry-tutorial/>

What is Tip Tinning and Why is it Important?

Whenever you're working with a new soldering tip, you have to make sure it's primed to conduct and pick up solder, as well as protected from oxidizing — which ensures your tips can live long and happy lives before it comes time for replacement. You do this by “tinning” your tips.

There are a few things that will shorten the lifespan of your soldering tips, and unfortunately even proper use is one of them. The hotter the temp, the more susceptible your soldering tips are to corrosion, so it's important to keep them as clean of soot and impurities as possible, as well as covered with a protective layer of solder.

Tinning is basically covering your soldering tip in solder and flux to protect it. It's no fun to find black sooty stuff on your work! Plus, those impurities will weaken your piece; think of them as little weak spots in your pewter. The fewer impurities, the stronger your finished jewelry.

Now there are a few ways to do this, but I find it's easiest to do one of the following:

Method #1: Lead-Free Rosin-Core Electrical Solder

This involves using an electrical-grade solder to prime your tip.

Start with a cold iron. Load your tip, screw it tight, and wrap the first 3/4" of the tip with electrical solder. This type of solder is very thin (about 1mm or less), and features a rosin core that keeps the tip free of corrosion without being as acidic as regular paste flux.

Once you've spiraled the solder tightly around your tip, trim the end off with wire cutters and turn on your iron.

Wait a minute or two for it to get up to temp. Once it does, you'll see the solder “bloom” and collapse into liquid pewter, coating your tip. Quickly wipe the excess solder with steel wool, then dip the tip in your regular (paste/gel/etc.) flux and coat with Silvergleem Solder.

Go back and forth a couple times between loading your tip with solder and wiping clean with steel wool until your tip looks nice and shiny. Now you're ready to make stuff!

Method #2: Using Tip Tinner

Tip Tinner comes in a little tin, and I haven't noticed much of a difference between brands. It's generally made with a combination of powdered solder, flux and a cleaning agent like sal

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ammoniac. Secure it with a bit of heavy duty foam tape to your heat-proof work surface so you don't have to hold the tiny tin with your hand while you're rubbing it into oblivion (second-degree burns put a real damper on the experience).

Load a new tip into your soldering iron and as soon as it starts to get hot, rub it firmly against a block of Tip Tinner. You'll want to cover as much of the tip as possible. Don't be afraid to press — your tip should come out liquid-silvery. Don't stop until it looks like the Terminator

Use a wad of steel wool to wipe the Tip Tinner from your tip, and cover it in Tinner again. Wipe off with the steel wool.

Now break out your solder and cover the tip in that, too. Let it melt in and be aware of any spots the solder doesn't want to run — you'll want to revisit these spots with Tip Tinner until the entire working surface of the tip is covered neatly.

After you've tinned your tip, you can begin soldering your projects.

The better maintained you keep your tips while you're working, the longer they'll last. Pay attention as you work, being careful to clean tips with fine steel wool and rubbing firmly against a block of sal ammoniac (a cleaning agent) to rid it of any impurities/oxidation.

It's also important to remember that at the end of every soldering session, you need to wipe your tip clean of any sootiness with fine steel wool and coat it one last time in a nice thick layer of solder and *then* turn your iron off. This will protect your tip from oxidizing while you're not using it.

Keeping the temp high helps solder flow fast and smooth, but heat and regular use degrade your tip every time you use it, so you want to make sure your iron's only running while it's in your hand or about to be. If you have to stop to add foil to a stone, burnish a piece, get a jump ring ready, etc, *tin your tip and turn your iron OFF.*

The more you let a soldering iron tip sit on without using it, the faster it'll degrade. With proper maintenance your tips will last you many hours of work-time, but always keep extras around so you don't burn a tip out at midnight with no usable replacements!

Taking care of your tools is important, and tinning your tips is no exception. Assure the long life of your soldering tips with proper care and maintenance.

Basic Soldering Step-by-Step: Tinning Copper Foil Method with Solder Iron

- Place your piece of glass with copper-taped edges (slide) into a **clamp**. (See article "Tinning Copper Foil" for instructions on this technique.)

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- "Season" the **soldering iron** by placing the end of the solder on one side of the tip of the solder iron.
- Wipe the solder off the tip with a damp sponge.
- Repeat Steps #2 and 3 for the other side of the tip.
- Brush the copper on the slide with **flux** to help the solder flow smoothly.
- Holding the **solder tip** just above the copper, place the end of the solder against the tip of the iron until the solder begins to melt.
- Pull the solder away from the iron tip.
- The solder flows between the tip and the copper.
- Without touching the copper with the tip "pull" the solder across the copper. Applying this layer of solder is called "tinning."
- Add a ring to the slide – place a jumpring in the tweezers and place it on the edge of the slide
- Apply flux to the are including where ring will be attached to the slide
- Repeat steps 6 through 9
- Allow the assembly to cool
- Wash with warm water and soap before using in a design

Other Resources:

Pinterest for ideas

<https://www.fler.cz/shop/almabe/prodano/seznam> This is a Czech artist with amazing work

There are some You Tube videos but not many

For the techniques – the stained glass community is a great resource

How to foil stained glass – excellent resource on the types of tape and taping techniques

<https://inlandcraft.com/wp-content/uploads/2017/08/how-to-foil-stained-glass.pdf>

Book: