

TORCH FIRING

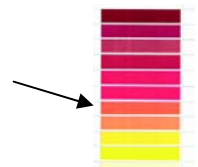
Torch firing is a great, inexpensive, way to fire your metal clay. You can use a small butane gas torch, like a kitchen torch, to fire all the Art Clay Silver clays.

The piece you fire shouldn't be much larger than a £2 coin, and weigh no more than 25 grams.

- The manufacturer doesn't recommend you torch fire items that include cores of Cork Clay. However, I know of a lot of people who have had success with this – taking their time and being careful. Torch firing is not suitable for projects that include glass, ceramic or porcelain.
- You can fire fine silver findings and small gemstones (5mm or under) suitable for silver clay with the torch.
- Small, appliqué-sized pieces of Art Clay Paper Type can be torched, but whole sheets or large pieces must be kiln fired.
- Art Clay Gold Paste and Accent Gold for Silver can be fired onto Art Clay Silver, using the torch. Use an agate burnisher to help bond the gold to the silver, by gently burnishing whilst the piece is still hot. Re-heat and burnish as needed.

Directions

- Place the dry piece on a ceramic fibre firing brick. The piece **MUST** be completely dry.
- Be sure to read the instructions included with the torch before you begin to fire. When you purchase a torch it is empty. The fuel required is cigarette lighter butane.
- Dim the lights in the room to help you see the glow during firing. This is how you tell what temperature the piece is at.
- Switch on the gas torch and direct the flame at a 45° angle at a distance of about 5 centimetres. This distance will vary depending on the torch you are using and the size of the piece.
- Move the flame around the piece to heat it evenly. You will see a little smoke and flame as the non-toxic organic binder burns away. A white crystalline coating will appear.
- When the piece begins to glow peach (see the colour chart to the right), begin to time the firing. Continue to heat, keeping the glow, for the recommended length of time. If the piece glows a darker red, move the torch further away from the piece, and if you can't see the glow move the torch nearer.
- The melting temperature of silver is 960°C. If the piece begins to get shiny, or if you get silvery "flashes" across the surface it is far too hot. If that happens, quickly move the torch further away until the glow is just visible, and then continue firing until completed.



Estimated firing times

The table below show the manufacturer's recommended torch firing times. *I'd suggest that you fire your piece a little longer than recommended, to ensure a strong end result. For instance, rather than firing for 2 minutes, I would probably fire for 4 minutes.*

Clay volume	Firing time
up to 5 grams	1 - 1.5 minutes
6 - 15 grams	1.5 - 2 minutes
16 - 25 grams	2 - 4 minutes

Here are some questions I've recently answered about torch firing.

Q - How can you be absolutely sure the piece is fired? I can't afford a kiln so have to get good at this!

A - Simply by making sure you have held the right temp for a long enough time. You can tell the temperature by the colour of the piece whilst heating it. You want to keep it a peach/salmon-y colour.

Q - I made a pendant that was about 3mm thick 50p size and it appears fine, how do I tell?

A - It is pretty impossible to tell just by looking at it. If you're worried, you can always refire the piece with no problems.

Q - Can you repair fired pieces? Do you just use more clay to stick it?

A - Yes you can repair fired pieces. Yes, you can just stick on more clay, syringe or paste, or you can use Oil Paste. There are detailed instructions on how to use Oil Paste, and what it can be used for on www.silverclay.co.uk/down.htm

If you just stick on more clay (or syringe or paste) just remember that it will shrink, whilst the piece already fired won't. So you might need to adjust the design slightly.

Q - Can I really torch fire a piece that weighs 20g? It has got several layers of shapes pasted together, and a fold over bail.

Yes, you can fire up to 25g with a torch. However, I don't think we're always very clear when we talk about torch firing. As you say, 20g is a lot of clay! Let me explain:

If you were to roll out your 25g into a very skinny and veeeery long rectangle, I wouldn't recommend using the torch, as you wouldn't be able to heat the whole piece evenly.

Or if you built up your piece extremely 3D, say lots of little squares built up into some sort of tower shape, so it became really, really tall - again, you wouldn't be able to heat the entire piece evenly.

But, if you were to make, say, a fold-over chubby pendant, with some cut-out shapes added to it, it would be no problems using the torch - despite it being the same weight. Fold-overs are no problems. Neither are multi-layers.

Make sure your piece is COMPLETELY dry before firing, especially if it is several layers. Otherwise the moisture will turn into steam, which can cause your piece to explode, and jump high in the air - I've had one shoot of straight across the room, by the speed of light, I think! Only just missed me.

Q - Can I torch fire a moonstone set into the clay?

A - Beads and gems - some gems are ok (for instance, moonstone, hematite, sapphire and garnet), but you need to look at each individual stone. Inclusions and flaws might cause them to crack.

A safe bet is lab-created stones, like Cubic Zirconia. Ideally don't go over about 5mm sized stones, as the quick heating and cooling down which happens when you use a torch can cause larger stones to break. And green stones can be risky as they often change colour with the heat.

And, finally, a tip - I always fire my pieces for longer than recommended. This will ensure you get a strong end-result. You can't really fire a piece for "too long", just don't get it too hot!