

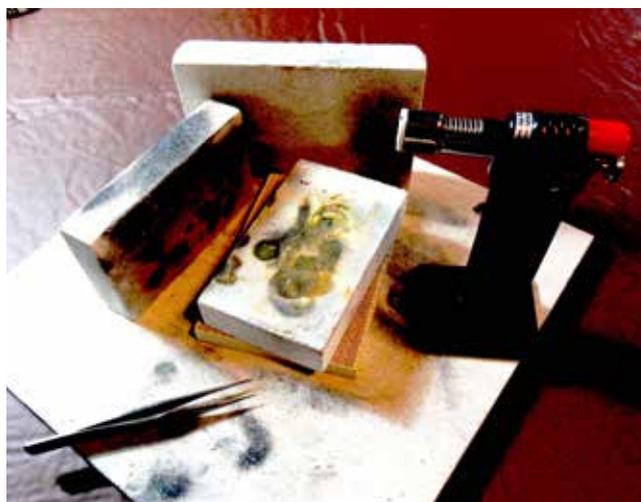
# How To; - Fire (Fine) Silver Clay

**ALWAYS TAKE CARE WHEN WORKING WITH HEAT AND / OR OPEN FLAMES.**

Firing is the (nearly) final process when working with silver clay - just polishing & finishing, and setting of non-fireable stones usually come afterwards.

Firing turns the item from a dry clay to a solid metal; it uses heat to burn away the clay 'binder' elements to leave just the metal particles, and then sustained heat to sinter the metal particles together.

As much work as possible should be done and refined before firing to best benefit from the clays properties - including impressing or carving details, sanding and refining areas, drilling, joining elements together and setting fireable stones. If there are smooth areas these can also be pre-polished for the best finish.



A piece can still be worked on once it is fired if needed, but once fired it needs to be treated as metal, so needs different equipment and skills if you want to do much work.

**Tip** - If using a new clay, or a new firing process - do a test run first on a simple piece before firing anything you've spent a lot of time on.

If you are not sure about a piece - don't fire it - while it is still clay, it can always be changed, added to, or re-constituted and turned back into workable clay or paste. A fired piece can have more clay added, but this is only usually successful if done (and then re-fired) before the piece is polished. After polishing, the metal surface is less porous, and hard for fresh clay to grip onto, so additions at this stage are usually soldered or riveted.

**THESE ARE GENERAL INSTRUCTIONS FOR FINE (999) SILVER CLAYS; PMC 3, PMC FLEX AND ART CLAY SILVER ONLY.** Other metal clays, including other silver clays are similar, but need different firing temperatures / procedures, so follow your pack instructions if you are not using one of these clays.

## Drying

Do not try and fire anything that is not 100% dry. If you are not sure whether a piece is dry - firstly see how it feels - does it feel a little sticky or clammy still, or dry and dusty? Dry clay should feel dry and dusty / chalky. Does it have any darker coloured patches? The clay turns a paler grey as it dries - darker areas may still be damp.



If you're still not sure - put the clay on a heated surface for 5 minutes such as a hotplate, mug warmer, or in an oven or dehydrator. If using an oven or hotplate - use only the very lowest setting - around 60-80°C. *Do not put into a microwave!* When the clay is warm, place it on a glass or metal surface (e.g. inside of your badger balm lid, or a mirror) for 30 seconds - if it leaves condensation, it's not yet dry.

## **IMPORTANT -**

- ALWAYS HAVE APPROPRIATE FIRE FIGHTING EQUIPMENT AVAILABLE JUST IN CASE
- READ THE INSTRUCTIONS FOR ANY TORCHES, KILN OR FIRE BRICKS AND NOTE ANY PREPARATION NEEDED IF IT IS YOUR FIRST USE / YOU'VE NOT USED FOR A WHILE
- CHECK ITEMS ARE FULLY COOLED BEFORE TOUCHING THEM

Clay will dry on its own if left out at room temperature, e.g. overnight. Any warm place will speed up the drying process of the clay - a dehydrator, or a hot plate, or anything from a sunny window ledge, to an airing cupboard or hairdryer. Be careful when drying items and moving them about as they are very fragile at this stage.

If your workspace is humid or damp, then you will need to make extra sure pieces are fully dry before firing.

Drying clay quickly or unevenly can cause pieces to warp - this is not usually a problem, as pieces will usually relax again during the firing process, but if the warping is causing a problem - moisten the item again and allow it to re-settle.

## **Supporting 3D Pieces**

For intricate pieces, hollow, and 3D shapes such as beads, it is a good idea to support the pieces as they are fired - you can sit the pieces in a bed of vermiculite or make a support using a thick fibre blanket. These are heat resistant, and will support the piece while it fires, preventing the shape from slumping or moving too much as it heats.

Vermiculite and fibre blankets can be purchased from silver clay retailers such as [www.metalclay.co.uk](http://www.metalclay.co.uk). Rest your clay piece so that it is fully supported, and any particularly heat sensitive areas such as stones or fine detail are visible (so you can see if they are overheating). Place this in your hearth or kiln and fire as usual (not useful for hob firing).

## **Firing**

There are three methods for firing fine silver clays - using a blow torch / hand torch (e.g. a plumbers or kitchen 'creme brulee' torch, or a jewellers soldering torch.

Using the fire of a gas hob, and using a kiln.

A kiln provides the most reliable and controlled firing, so long as the kiln is in good condition and is programmable, but is a substantial investment. Kilns also allow the inclusion of glass and a wider range of gemstones for firing in place, for creating using the paper type clays, for firing silver on ceramic bases, as well as cork and wood clays as support for 3D / hollow shapes, as well as firing larger and more complex pieces that a torch would either not be able to keep the whole piece consistently hot enough, or a torch would be too intense.



Most smaller and less complex items can quite safely and satisfactorily be fired with a torch or on the hob. A hob can fire a number of pieces at once, but generally only small, simple pieces. A torch can fire usually just one piece at a time (maybe 2-3 if they are small e.g. stud earrings) and although it is a more intense heat, is controllable and (depending on the flame size) can also be used for medium pieces and some pieces that need supporting.

See separate sheets for Kiln, Hob and Torch firing in more detail.