

General Guide for Metal Clay Beginners

It is not necessary to buy expensive tools and equipment to work with metal clay. We suggest starting out with fine silver metal clay and the clay itself is expensive. If you decide to do more work with metal clay you may want to buy some of the recommended tools. However, when you're first exploring metal clay, you may find items around your home you can use, without going to great expense.

We recommend beginners start out working with fine silver metal clay (**PMC3, PMC Flex or PMC+**) These clays can all be torch or gas stove top fired. Fine Silver metal clay is much easier to work with and achieve success than the base metal clays (copper/bronze/steel) Base metal clays are more economical but they are more challenging and for success, the majority need to be kiln fired.

The Different Types of Metal Clay

Paste or Slip

Metal clay comes in a variety of forms, the better known one is lump clay. It also comes in pots in a soft diluted form called metal clay paste or slip. Paste is useful for adhering pieces of lump clay together. It can also be used to paint onto shapes e.g. pasta shapes, cereal, lumps of bread or twigs, leaves or flowers. Applying multiple coats of metal clay paste and allowing it to dry thoroughly between coats can result in a very light and beautiful fine silver item.

Syringe Type

Metal clay is available in a syringe. This metal clay is specially formulated to be squeezed out of the syringe in thin lines. These can make lovely patterns and/or embellishments on the surface of metal clay. Metal clay beginners may find working with a syringe, challenging.

Paper or Sheet Type

There is a version called metal clay paper or sheet clay. This is a flat sheet of metal clay that can be cut with scissors and punches. It can also be plaited or folded into origami or other shapes.

Lump Clay

In lump form, metal clay can be worked and modelled exactly like any clay mediums. It can be rolled out, pressed into textures, cut it into shapes or pushed into a variety of moulds. It can be formed into animal shapes or flowers. The possibilities with this clay are endless. Lump Metal Clay is the form that most metal clay beginners start with.

Sterling and 950/960 Clay

Sterling Silver Metal Clay is the newest form of metal clay but there is also Stainless Steel, Bronze, Copper and many other options. It's exciting and new developments are happening regularly in the metal clay world.

Basic tools needed to work with metal clay

If you have worked with polymer clay, the tools are very similar. However, even if you are a complete metal clay beginner with no previous crafting experience, you can start using metal clay with a minimal investment in tools. Silver clay is expensive but it's not necessary to buy expensive tools to start working with metal clay. The following are some ideas for working with metal clay using tools you'll likely find in your home.

Work surface

It's useful to have a smooth, non-porous work surface to work on when using metal clay. A smooth plastic table mat is ideal. Or a piece of glass. An old picture frame that you can take the glass out of will work but be careful! Smooth ceramic tiles work well. Make sure the work surface is either glass, plastic, glazed ceramic or acrylic – NOT wood or cardboard which is too porous and may absorb the moisture from your metal clay, making it dry out more quickly and become difficult to work with.

Preventing metal clay from sticking

Metal clay can be sticky to work with. Before you open the packet, make sure your hands and all of your tools including your work surface have something on them to prevent sticking. Metal Clay is sticky to work with and will stick to fingers, textures and tools. In fact, most things that come into contact with wet metal clay will stick to it. For this reason fingers and tools need a coating or barrier to stop that from happening. The most economical material for a metal clay beginner to use is olive oil. **Very lightly** lubricate your work surface, hands and roller before you handle the metal clay. If you use too much oil you'll end up with a slippery mess so always use any lubrication, sparingly. Open your packet of metal clay before you get too greasy! I remove the metal clay from the enclosed cellophane packaging before lubricating my hands. Always keep your metal clay wrapped in film when you are not working with it– you can use any cling film or sandwich wrap.

Olive oil is commonly used but it does feel sticky on hands, tools, textures and it attract dust. We recommend Silki Drop as an alternative to Olive Oil. Always use any release agent sparingly.

What is Silki Drop?

Silki Drop Non Stick Release agent is Metal Clay Australasia's own metal clay anti-stick product. Silki Drop Non Stick Release agent is Australian made, economical and our Silki Drop is specifically for metal clay. A tiny amount of the lovely smooth Silki Drop goes a long way. It can be lightly sprayed, rubbed or brushed on. Silki Drop is Non-toxic and non-reactive. Unlike Olive oil, which is sticky and leaves a gummy, dust attracting residue on hands, tools and textures, Silki Drop is a lovely smooth coating for hands, tools, textures and more. Apply a light coating onto hands, tools or textures. Silki Drop will prevent metal clay from sticking.

Silki Drop was especially formulated to create a non sticky barrier between metal clay, tools and textures. This means lovely crisp textures on your metal clay projects and tools that won't drag or distort your wet metal clay. Silki Drop is non toxic and food safe.

Metal Clay Roller

Most people start by rolling out the metal clay and making small flat items. To roll out metal clay, you need a smooth, rigid, non-porous cylinder approximately 15cm long. Look around your home, you may have something suitable to start you off. A smooth pen or straight sided glass will do. Perhaps you have a glass bottle or some other kitchen or bathroom item that is a smooth cylinder shape? If you have done cake decorating or Polymer Clay work, you may have a glass or acrylic rolling pin. Look around your home and see what might fit the bill.

Acrylic Pipe

Many metal clay artists use acrylic tubes/rollers to roll out their metal clay. In DIY or hardware stores you can buy long lengths of acrylic pipe of varying diameters. They are not very expensive and you can saw a length into 15-16cm sections using a hacksaw. You may already have an off-cut of acrylic or PVC pipe in your garage.

Rolling Guides

Rolling guides are often referred to as spacers or batts. They are needed to make sure that rolled out clay has an even thickness. Metal clay users place guides on each side of the metal clay as they roll it out. The simplest guides used commonly are regular playing cards. A stack of playing cards each side of the metal clay allows you to roll consistent thickness of clay. In many tutorials you often see instructions to roll out a piece of clay 3, 4 or 5 cards thick. This term refers to the thickness of regular playing cards. Playing Cards are usually glued or sticky taped together to achieve 3, 4 or whatever card thickness is needed.

DIY rolling guides

If you don't have playing cards, you could create your own rolling guides using cardboard. Cereal packets are very useful for this. Simply cut lengths of card from your cereal packet and use these to stack either side of your clay. A cereal packet may be a little thicker than a playing card but you can experiment with this to see what works.

Textures

One of the many joys of metal clay is its ability to take on texture. When you have rolled out your metal clay you may want to experiment with texturing it. This really is where the fun begins. You can use almost anything to texture your clay. It is important to make sure the texture making item has some olive oil or release agent on it to prevent sticking. With many textures it's easier to oil your finger lightly and gently apply the oil to the surface of the rolled out metal clay, then gently press the texture into it, rather than put oil onto the texture itself.

Natural textures

Look around your garden or at the local park. Nature has many things that make wonderful textures, leaves, bark, twigs, grasses, seed pods, acorns, pine cones. The beach is another great place to pick up shells and bits of drift wood which are wonderful textures to use with metal clay.

Around the home

Look around your home and see what you can find. Bottle tops and toothpaste caps often have patterns on them which can be pressed into or rolled onto metal clay. Children's toys may have very interesting textures. Once you start noticing textures around your home and garden, you'll find yourself seeing the potential for texture everywhere.

Buttons

Do you have a button box? Buttons are a great source of texture for metal clay jewellery. You can use them all over a piece or use a special pattern as a focal point for a piece.

Fabric

Fabrics also make good textures. Lace, leather, muslin, linen all work well. Although fabric with an open weave can make fabulous textures, it may be a little more difficult to work with and the metal clay may stick in the weave. Lubricate the clay and press the texture gently onto the clay ensuring it doesn't squeeze through the holes too much. Charity shops are a good source of cheap buttons and fabrics.

Wallpaper

Textured wallpaper is very popular and a trip round a hardware or DIY store can be a great inspiration. Some shops selling wallpaper allow customers to tear off a small sample to take away free. Paper may not last as long as some other textures. Lightly oil the metal clay before using paper textures.

Make your own textures

You can make your own textures very cheaply. Pencil erasers are a great tool for texture. They are easy to cut and carve using very basic tools. With a craft knife, cut shapes into the eraser, or use carving tools to carve out lines and designs. The small erasers that fit on the tops of pencils can make little stamps for a simple design in metal clay. Wine bottle corks can also be carved to make interesting texture tools. Glue pieces of string in custom designs onto cardboard or cut out foam shapes. Use corrugated cardboard or any other interesting textured items you can find. You always need to use a release agent to stop the clay from sticking to textured surfaces.

Polymer Clay texture plates

Polymer clay is a wonderful material to create your own texture plates. Flat, baked sheets of polymer clay are very easy to carve or you can push textures like shells into unbaked polymer clay, bake it and use the resulting texture sheet with your metal clay.

Cutting a shape out of metal clay

Cut out your design after you've textured the rolled out metal clay. You can use all kinds of objects to cut out designs. Wooden toothpicks are very cheap to buy and they are an invaluable tool for the metal clay artist. The simplest way to cut a shape is freehand using a toothpick. Maybe your texture will suggest a good shape or you can just cut an organic swirly pattern. A good craft knife is useful.

Cookie Cutters

Small cookie cutters are great if you have them around the house, They are very useful if you want to make several pieces the same shape and size, e.g earrings. Stencil cutters with a whole sheet of different sized circles, ovals or squares are also useful. To use these, choose the size of shape you want to use. Using your playing cards or cardboard to support the stencil lay it gently over your metal clay and using a toothpick or cocktail stick, cut the shape using the stencil as a guide. Bottle tops can be used as metal clay cutters or you can cut around small objects with interesting shapes using a toothpick.

Stencils

You can also make your own stencils by drawing a shape on graph paper or tracing a shape from a book using greaseproof kitchen paper or tracing paper. Then using some cardboard, tape or glue your design to the cardboard and using a craft knife, cut the shape out of the cardboard. Clean up the edges and corners with a craft knife and you have a stencil to use with metal clay.

Cutting Holes in Metal Clay

The simplest pendant or earrings are suspended on a silver ring, called a jump ring. While the metal clay is soft, you can cut a hole in your piece for the jump ring. The easiest and cheapest way to do this is with a drinking straw. Make sure you keep drinking straws when you're out with your family so you have a variety of sizes. Keep an eye open for smaller ones which are quite rare but sometimes used as coffee stirrers in cafes.

To use a drinking straw, lightly lubricate the end and punch a hole in the metal clay using a slightly twisting motion. Lift it straight up and use a cocktail stick to poke out the plug of clay from the end of the straw. Retain any bits of metal clay and add it to your left over clay. Always cover it with cling film or place it in an airtight container. No metal clay need go to waste.

Other uses for drinking straws

You may not want to hang your piece using a jump ring but another way to hang a pendant is with a wrap over bail. The bail is the part of the pendant that has the chain or thong go through it to hang the piece.

When you make a metal clay pendant with a wrap over bail, you cut it long enough to allow part of the pendant to be flapped over to the front or the back and stuck down forming a loop. To form the loop, use a drinking straw. Oil a straw and flap the metal clay over this to form the loop. Stick down the flap using a little slip – see next section – and make sure the join is well attached.

Alternative bails

Another way to make a bail is to cut a small rectangle of metal clay and stick this to the back of the pendant forming a loop. Once again, an oiled drinking straw helps to form the loop and can be left in place until the piece is dry. With both of these types of bail, when the piece is completely dry, carefully remove the drinking straw by gently twisting it and pulling it out.

Sticking metal clay pieces together

If you want to stick one piece of metal clay to another you need to use water or clay 'glue', called slip or paste. You can make your own paste by breaking off small pieces of lump metal clay and squashing them down onto your work surface with something like a palette knife or a flat piece of flexible plastic. Add a couple of drops of water and mix it into the metal clay until the water is absorbed and mixed into the clay. Add a **little** more water and repeat if necessary. Soon the metal clay mixture will become like thick cream and can be scooped into a small container with an air tight lid.

Top up your paste/slip

When you have a little fresh paste in your container, you can add to this and keep a good supply. Any small lumps of metal clay that collect on your work surface can be dropped into the slip jar and stirred in. When you file the edges of your dry metal clay pieces to smooth them, the filings can all go into the paste pot. Stir them in and check the consistency of the slip, add more water if necessary and it'll always be there to use. Try not to add dust or any other non-metal clay contaminants to your paste. To stick two pieces of clay together, paint paste onto the metal clay piece you want to stick on using a small paintbrush and gently press them together. If you find some paste squishes out the sides, use a clean, slightly damp paintbrush to lift this off.

Drying Metal Clay

Metal clay always needs to be thoroughly dried before finishing and firing. You can leave the clay out in the air to dry naturally or put it into an airing cupboard or warm spot, a food dehydrator or next to the oven to speed up the drying. Blowing it with a hairdryer also works well. As long as it's not too hot, it'll be fine. Sometimes if you speed up the drying of the metal clay the surface can look dry but the inside or back are still damp. Carefully turning your piece over during drying will help to speed up the drying, will stop warping and make it more uniform. You can also place your dried piece on a mirror to check for any residual moisture.

Warping

Speeding the drying of metal clay by heating the piece may cause flat pieces to warp a little. This can be resolved after the piece is fired, by gently hammering the piece flat with a rubber or rawhide mallet. If it's important for your design to be completely flat or you have stones embedded in the piece that might be damaged by hammering, allow the metal clay to dry naturally and turn the piece over regularly during the drying process.

Finishing Metal Clay

After the metal clay piece is completely dry, you can refine the edges with sand paper, emery boards, nail files or salon boards. These are great cheap tools and are very effective on dry metal clay. Be careful when handling dry metal clay. It is very fragile and will break if you are rough with it.

Refining

Smooth the edges of the piece with an emery board. You can smooth the inside of a hole in the dry metal clay or the inside of a bail using a wooden toothpick. The wooden toothpick is a tiny natural file and works really well on dry metal clay.

Drilling holes

You can also drill holes in your pieces when they are dry. Use a small drill bit in your fingers to drill a hole, the dry clay is soft enough to do this. Alternatively, a sharp pointed craft knife can make a great drill.

With your metal clay piece flat on a work surface, hold the knife or drill bit upright at right angles to the surface, with the point down where you want the hole. Don't press, just turn the knife or drill round and round so the point drills into the clay until it goes right through. Go slowly and be patient. If you press down, you risk breaking the piece. As long as you can see dust coming from the hole, you are drilling.

Remember, what you see is what you get!

It's important to remember that the surface of metal clay does not become smoother or melt during firing – **unless you over fire or melt it!** Whatever you see on the surface or edges of the clay in the dry stage is exactly what you'll get on the finished fired silver. Finishing well at the "dry stage" is critical to the end result. If there are any dents, chips or scratches ON YOUR DRIED PIECE that is exactly what your piece will look like after it's fired. It is much harder to rectify imperfections when the piece is fired and solid metal. It's well worth spending time in the dry stage to get the piece looking good. You will need to invest in wet and dry sandpaper (**used DRY**) to sand and refine your pieces. Be gentle, dry pieces are fragile! Start with 400 grit sandpaper and remove any rough edges and scratches. Move on to 800 grit to refine and finish the piece further. Always go over and finish sanding the whole piece again with the finest grit of sandpaper you can find – usually 1200 grit. I cannot emphasize how important dry finishing before firing is, if you want a professional end result. Brush away any dust with a very soft bristle brush. Use a magnifying glass to inspect your piece for any imperfections, before firing it. ***** **PLEASE REFER TO OUR BEST PRACTISE METAL CLAY FINISHING for more detailed information. If you are ordering metal clay from us for the first time, please request this information sheet in the comments area of your order.**

Firing Metal Clay

Gas Stove Top

The simplest way of firing the metal clay in your home is to use a gas stove top ring or Gas BBQ. You'll need to buy a small steel mesh to support the dry metal clay on the ring. Have a look at this tutorial on how to fire metal clay using this method. **Please be aware that fine silver metal clay pieces that are fired in this way will never be as strong as pieces that have been kiln fired. For this reason we do not recommend Gas Stove Top firing rings or other items that require maximum strength. Earrings and small pendants are fine. Despite the short firings most often demonstrated, our recommendation is to Gas Stove Top fire pieces for a minimum of 8-10 minutes. You can always stop the firing process for a while and then refire the piece again... and again if necessary.**

<https://www.youtube.com/watch?v=Wc-wfJ3YpYY>

Butane Torch

You can also use a hand held butane torch. Some people use these in the kitchen so if you have one, you can use it to fire your metal clay. Some people are resistant to this method of firing but in my opinion using a hand held butane torch gives the user a lot of control over the firing process. Have a look at this tutorial on how to fire metal clay using this method.

Please be aware that fine silver metal clay pieces that are fired in this way will never be as strong as pieces that have been kiln fired. For this reason we do not recommend Butane Torch firing rings or other items that require maximum strength. Earrings and small pendants are fine. Despite the short firings most often demonstrated, our recommendation is to Butane Torch fire pieces for a minimum of 8-10 minutes. You can always stop the firing process for a while and then refire the piece again... and again if necessary.

<https://www.youtube.com/watch?v=OwwZ3RnkEHw>

Polishing Metal Clay

After your metal clay piece has been fired you will notice the surface is a white colour. This is the natural surface of raw silver – hills and valleys at a microscopic level which doesn't reflect the light. There are various ways to bring out the shine that we know as silver. If you do not have any metal clay tools or brushes, the easiest way is to burnish or rub the surface with something smooth like a teaspoon or tablespoon. They would work well on the edges or on any raised areas. Simply rub the teaspoon along the edge and you'll see the silver begin to shine.

Burnishing Brushes

If you have a piece with deep textures, it will be more difficult to get into these areas with a flat tool and you could risk scratching the surface. A stainless steel or soft brass brush is the best thing to use in this case. **The best brush to use is included in our OUR BEST PRACTISE METAL CLAY FINISHING Information Sheet. If you are ordering metal clay from us for the first time, please request this information sheet in the comments area of your order.**

Basics Metal Clay Tool List

Work surface – smooth plastic place mat, glazed ceramic tile, thick piece of glass

Olive oil spray

Craft knife

To keep spare clay moist use plastic sandwich wrap, Gladwrap or similar

Roller – straight sided drinking glass, acrylic pipe, smooth pen, glass bottle

Rolling guides – playing cards or cardboard strips cut from a cereal packet

Textures – natural items, fabric, buttons, wallpaper, make your own

Cutting holes and supporting bails – drinking straws

Cutting shapes – stencils, cookie cutters, toothpick or cocktail stick, make your own.

Storage jars – film canisters (perfectly air tight but difficult to find these days) small lidded jars

Drying – hair dryer, food dehydrator, warm air drying spot

Finishing – emery boards, salon boards, nail files, sand paper, wooden toothpicks

Firing – butane torch, fibre brick, steel mesh for gas stove top firing

Smooth steel teaspoon or tablespoon.

For a more comprehensive list of recommended Beginners Tools please refer to our BASIC TOOLS and SUPPLIES FOR STARTING OUT WITH METAL CLAY Information Sheet