

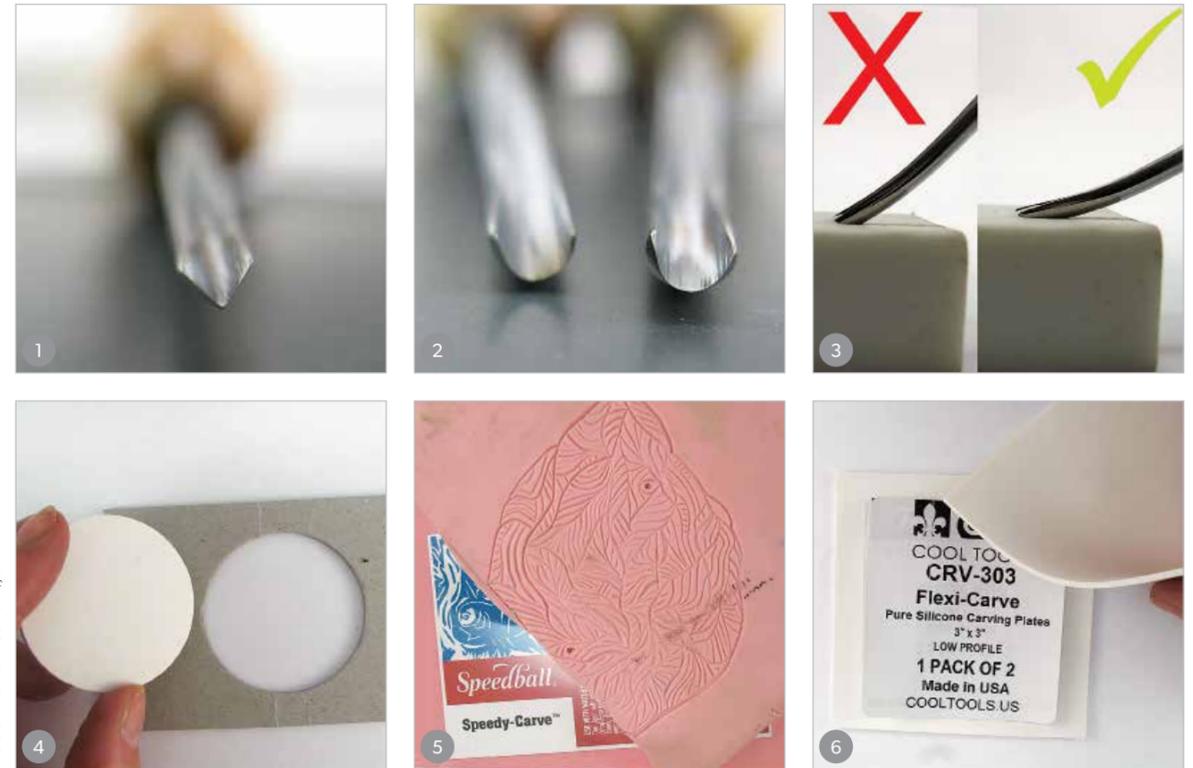
CARVED PATTERNS

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Making unique textures for your metal clay designs sets your jewellery apart and allows for endless design options. Carving tools provide an opportunity to cut patterns directly into dry clay or to make your own patterned stamps, which can be used over and over again. This project gives some tips and hints on how to use micro carving tools to carve a pattern directly into dry metal clay. It also shows some materials which are useful for making your own carved pattern stamps. The best type of silver metal clay to use if you are carving directly into the dry clay is Art Clay 950 or PMC Flex. Both of these clays have a bit of flexibility, which makes carving them smoother and easier. You can also carve directly into dry bronze or copper clay.

MATERIALS & TOOLS

- 25g PMC Flex or Art Clay Silver 950
- Fine silver syringe type clay
- Gold paste
- Embeddable bail
- Sterling silver chain
- Earring wires
- 0.8mm and 1mm drill
- 1.5mm #9 or #11 micro carving gouge
- 1.5mm or 2mm micro carving V-tool
- 1.5mm micro carving plough
- Plastic erasers
- Emery board
- Sanding sponge
- Polishing papers
- Soft pencil
- Paintbrushes
- Firing tools
- Vermiculite or fibre blanket
- Polishing tools
- Liver of Sulphur



PHOTOGRAPHS: LAUREL GUILFOYLE / JULIA RAI

HOW TO MAKE

1. There are two main types of micro carving tool, V-tools and gouges. They are mainly sold for woodcarving but are really good for carving dry metal clay, baked polymer clay or silicone and plastic printing media. The V-tool makes a line with a V-shaped profile and can be used to make fine lines or deeper, wider lines, depending on the angle at which you carve. The smallest are 1.5mm and there are also 2mm and 3mm V-tools. These sizes refer to the width between the ends of the cutting edges. The angle of the V is normally 90°.

2. The gouge tools make a line with a U-shaped profile and the number of the tool defines how deep the curvature of the U is. This curvature is called a 'sweep' and the sweeps range from #1, which is a straight chisel to #11, which is almost a semicircle of the diameter of the tool's width. Useful sizes to buy for working with metal clay are #9 or #11, although the actual difference between these two sweeps is very small. Gouges are available in a range of sizes from 1.5mm to 5mm. Like the V-tools, these sizes refer to the width between the ends of the cutting edges. Two brands available in the UK are Drake and Dockyard carving tools.

3. It can take some time to perfect the technique for using carving tools so the cheapest way to practise is with plastic erasers.

These are easily available and will allow you to practise the technique and work out your designs. Keep the carving tool at a shallow angle and do not allow the whole tool to disappear beneath the surface you are carving. If you need a deeper line, carve your initial line then carve again down in the original line to make it deeper. Use a larger tool to carve a wider line. Always keep your fingers behind the tool as you are carving. The tools are very sharp and will easily cut you if you slip while carving.

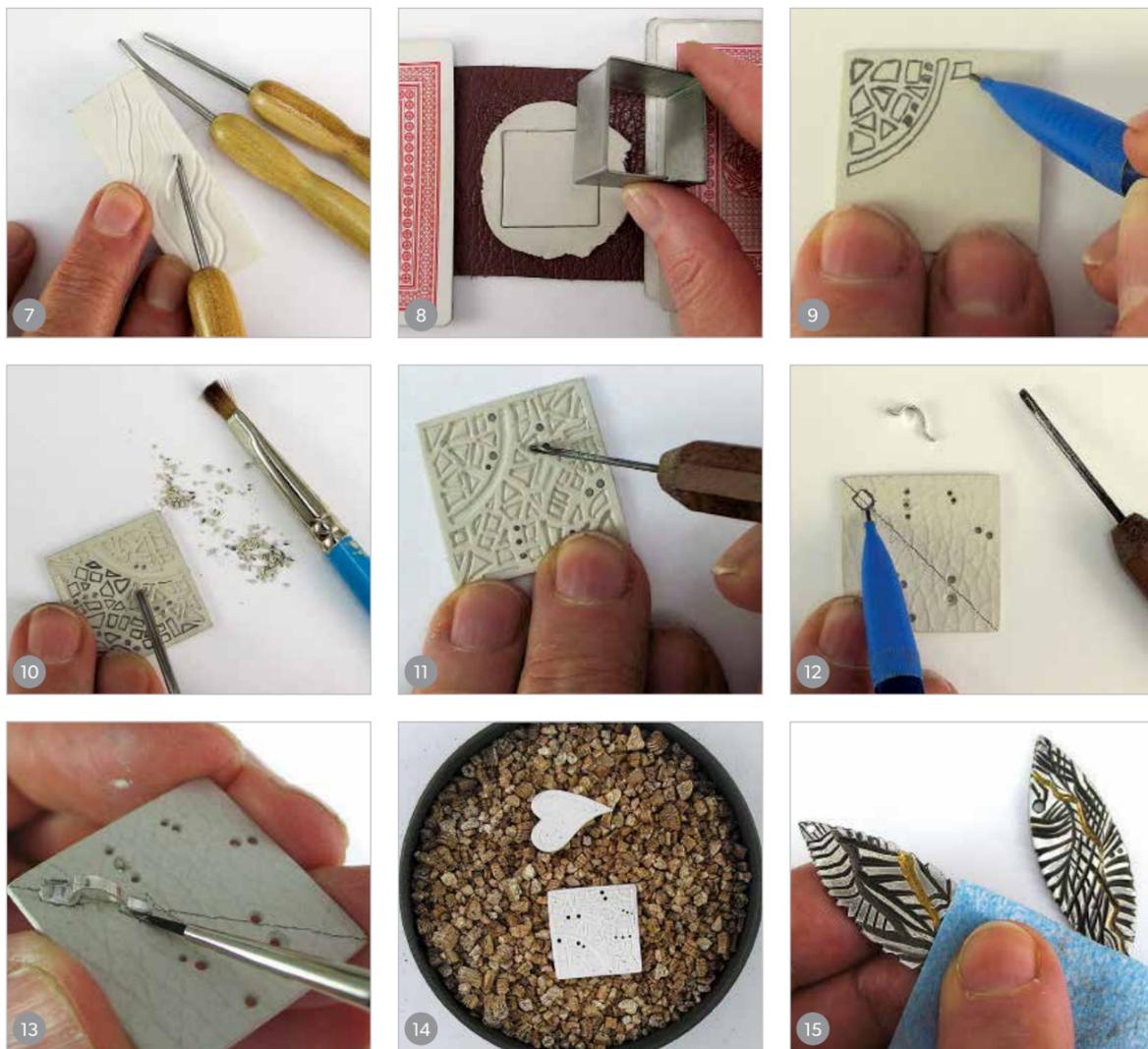
4. As well as being cheap to buy, erasers can be used to make stamps to impress into rolled-out wet clay. There are also a variety of materials specifically designed to make your own stamps. Essdee Printing Stamps are available from a range of craft suppliers online. They are round discs 45mm in diameter x 3mm deep and come in packs of 10. They are supplied with a reusable cardboard holder allowing you to keep the disc steady and your fingers well away from the carving surface. They have a peel-off backing protecting a sticky surface so you can stick them onto a piece of acrylic or wood to use the stamp again and again.

5. Speedball Speedy-Carve is a pink eraser-like material that comes in large blocks in a variety of sizes. This can easily be cut with a craft knife to make smaller stamps or interesting shapes.

It is 6mm deep so you can use both sides and the edges if you want slim designs. You can add your pattern designs to the surface with a pencil or you can transfer an ink-jet or laser printed images onto the surface using a slightly warm iron. This is also available from a wide variety of online sources.

6. Cool Tools in the US have a low profile, flexible carving plate made from silicone. These are 75mm square x 1mm thick. They come in packs of two and are available in the UK from Metal Clay Ltd. If you want very deep patterns you may be better off with the Essdee stamps or the Speedball Speedy-Carve but for shallow textures, these plates are perfect. There is no need to use any lubricant when impressing these into your metal clay as the silicone does not stick.

7. When carving any of these materials with a view to impressing the pattern into rolled out metal clay, remember that the carved lines will be raised in the metal clay and the surface of the carving medium will be the bottom of the impression. This is particularly important if you are intending to add any form of colour into the impression. If the carved lines are widely spaced the deep areas in the metal clay will be quite large. Remember also that the deeper your carved lines are, the thicker you will need to make your metal clay so the fired piece is strong. ▶



8. To make a carved pendant, roll out silver clay six cards thick onto a piece of oiled leather if you want a texture on the back. Allow this to dry, then refine the edges. Make sure the surface that will be carved is smooth and free from any imperfections, cracks or lumps. You can achieve this by sanding with a sponge or polishing paper if necessary. Wiping gently with a baby wipe can also help to make the surface smooth and blemish free.

9. Draw your pattern onto the surface of the dry clay using a soft pencil. Make sure the lines you draw are approx. the same width as the carving tool you are going to use or the line size you are going to make. If you go wrong while drawing, you can remove the error with a damp finger or a baby wipe. Your main pattern can be made up of lines but you can also drill holes through the clay or plan to cut shapes out of the edges of the piece. You can see this in the earrings (opposite page) and charm (p50) examples. You can file

notches or use the carving tools to cut curved or V-shaped patterns into the edges.

10. Carve following your pencil lines and brush the carvings away as you go with a soft paintbrush. Turn the piece as you carve a curved line so you are always carving away from yourself at a comfortable angle for your hand. You may find that your lines lack consistency if you carve in one direction only. This can be particularly obvious at the start and end of each line. If you carve the line and then turn the piece around and run the carving tool along the same line again in the opposite direction this helps to correct inconsistencies at the ends of the line.

11. Take care if you are carving lines close to each other. If you find that you have carved away too much, fill in the error using syringe type clay. This allows you to make a very precise line or fill where it is needed. Dampen the clay under

where the syringe will go so it adheres well. If you make a major mistake, fill the error using well-hydrated lump clay, dry, sand and then carve again. Drill any holes you have planned and then wipe the piece with a baby wipe to clear any excess pencil lines. If your lines are not clean enough, you can use a micro plough tool to correct them. A plough is like a tiny chisel and comes in a variety of sizes. Use it straight down into the line or slightly sideways at the ends of lines to clean up imperfections.

12. The micro plough tool is also good for creating apertures in the clay for embeddable bails. First draw a line down the back of the piece from corner to corner so you have a guide to place the bail accurately. Stand the bail on the clay and centre it down the guideline. Mark the top 'leg' of the bail all round with a sharp pencil. Hold the micro plough at a 90° angle to the surface of the clay and press down to cut a shallow dip along all of the guidelines for

the bail. This gives you clean start and stop guides for your aperture. Use the plough tool at a shallow angle to chisel out the clay inside these lines to a depth of around 1mm. Scrape the plough along the bottom of the aperture to ensure it is even. Keep checking the depth of the aperture with your bail so you don't go too deep.

13. The 'leg' of the bail should be just below the surface of the clay so you can cleanly cover it with a skim of paste. When you are happy with the first aperture, put the bail back in place and mark the position of the second 'leg' with a pencil. Carve this out in the same way as the first aperture using the plough tool. Dampen both apertures, fill them with syringe type clay and press the bail into place. Smooth the excess paste over the 'legs' with a paintbrush so they are completely covered and secure. Allow the paste to dry and clean up as necessary so the back has a consistent, neat finish.

14. PMC Flex can be torch fired but Art Clay 950 requires kiln firing. Place the pieces on a bed of vermiculite in a kiln safe container or use fiber blanket to cushion the bail. Fire the Art Clay 950 full ramp for 30 minutes at 500°C to burn out the binder and then increase the temperature to 870°C and fire for one hour. When the pieces are cool, use a brass or steel brush to achieve a satin finish or tumble or hand polish to a high shine unless you are going to add gold paste. Gold paste adheres best to the unpolished surface of fired silver.

15. You can leave the pieces silver, but adding colour or patina into the carved lines will really make your pattern pop. Adding gold paste makes a lovely contrast to the silver, especially if you add liver of sulphur patina and then polish the high spots. Add a coat or two of gold paste directly onto the unpolished surface down into the carved lines, allowing the paste to dry between coats. When the gold paste is dry, use a torch to heat the piece to a peach glow and then turn the torch off. This is sufficient to fire the gold and bond it to the surface of the silver. Burnish the gold using an agate burnisher while the piece is still hot to reinforce the bond. Patina and then polish the high spots with polishing papers.

RESOURCES

Art Clay Silver 950, fine silver syringe type clay, gold paste, embeddable bail: metalclay.co.uk
Chain and ear wires: cooksongold.com
Dockyard and Drake micro carving tools: csacj.co.uk

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