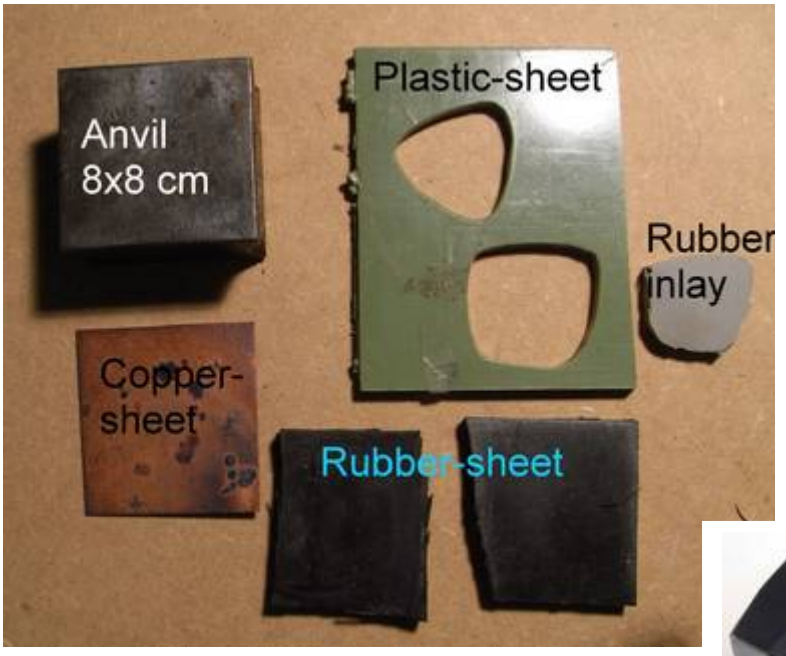
How to dome irregular forms quickly. by Edmund Massow, www.emailkunst.de
Reviesed by Roberta Warshaw

With this procedure you can dome nearly all regular or irregular forms like ovals, circles, triangles, stars or what ever, if the edges or the corners of the form are not too tight.. The procedure worked successfully with copper-sheet up to 0,5 mm and fine silver-sheet up to 0,8 mm thickness.

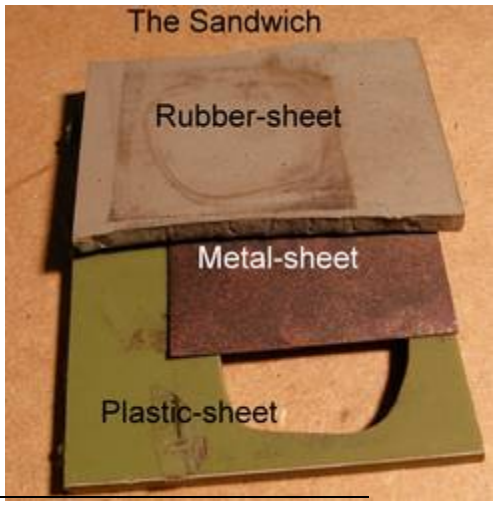


Tools you need:

1) Lump hammer 1-2 kg (2-4 pounds) with a rubber cap; Alernatively a havy rubber hammer;
2) Jewellers saw with coarse and fine saw blades.
3) a metal block of about 8 x 8 cm..Like a bench anvil. Alernatively a thick hardwood block. The anvil or the wooden block should be only 1-2 cm larger, than the form you want to dome. If the block is too large, you lose a lot of the power of the hammer stroke.

Material you need:

1) Plastic-sheet not too brittle but a bit elastic, about 5-8 mm thick (do not use Acrylyc glass because it is too brittle)
2) Rubber mats, about 5 mm thick, without any inlay, no textile, no wire netting, hardness about 40 shore[1] (measures the hardness of the rubber.)



Procedure:

1) Sketch the form you want to dome onto the plastic-sheet and cut it with a jewelers-saw and a coarse saw blade.
2) Cut the metal sheet so that it is about 10 mm larger than the form.
3) Anneal the metal-sheet and let it cool off.

[1] See Wikipedia http://en.wikipedia.org/wiki/Shore_durometer#Method_of_measurement

4) Put it on top of the cutout of the plastic-sheet. Make sure that the metal-sheet overlaps the cutout well.
5) Put a piece of the rubber-sheet at the top of the Sandwich and then the bench anvil.L

6) Lay the plastic-sheet / metal-sheet / rubber-sheet / anvil "sandwich" on a solid ground. I lay it on the floor of my workshop.
7) Strike hard, with one forceful strike, exactly vertically at the top of the anvil.
If the strike was hard enough, the metal-sheet should get domed about 5 mm.
If not, anneal the metal-sheet again, cool down, lay it exact into the cutout, cover it with two layers of the rubber-sheet and strike hard again.

For enamel/jewellery-work the doming of about 0,5 mm should be enough.
To heighten the curvature, anneal the domed piece again.
Make an inlay of the rubber-sheet. It should be a bit smaller than the "doming-cutout".
Put this cut out into the inside of the dome.
Then the rubber-sheet and the anvil.
With the lump-hammer strike hard again.
If the doming is higher then one plastic-sheet thickness, make a cutout of an other plastic-sheet, which is a bit larger then the cutout of the work-piece form.
Lay that with the cutout under the plastic-sheet with the form cutout.

Outside of the dome

Inside of the dome

With the jewellers saw cut saw along the outline of the dome. The domed piece is ready for enamelling.

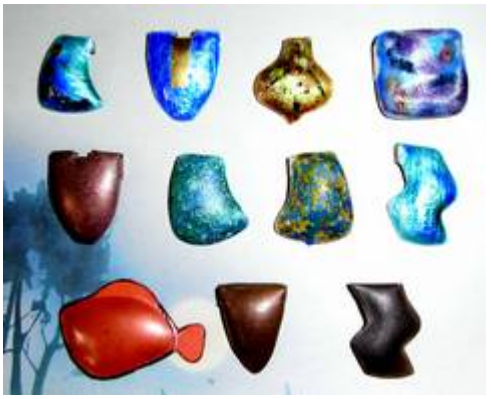
Advantages and disadvantages of the method.

The advantage of this method is:

1) Little need of tools
2) Rapid and accurate production of curves with an irregular outline

Disadvantage:
You get more waste because one must make the metal sheet about 1 cm larger than the domed form.

If you need to dome many of the same forms, it is advisable to make a more stable and longer lasting shape. I glued a piece 1.5 mm thick rigid aluminum plate on a 16 mm particle board. Out of this sandwich, I sawed out the forms.



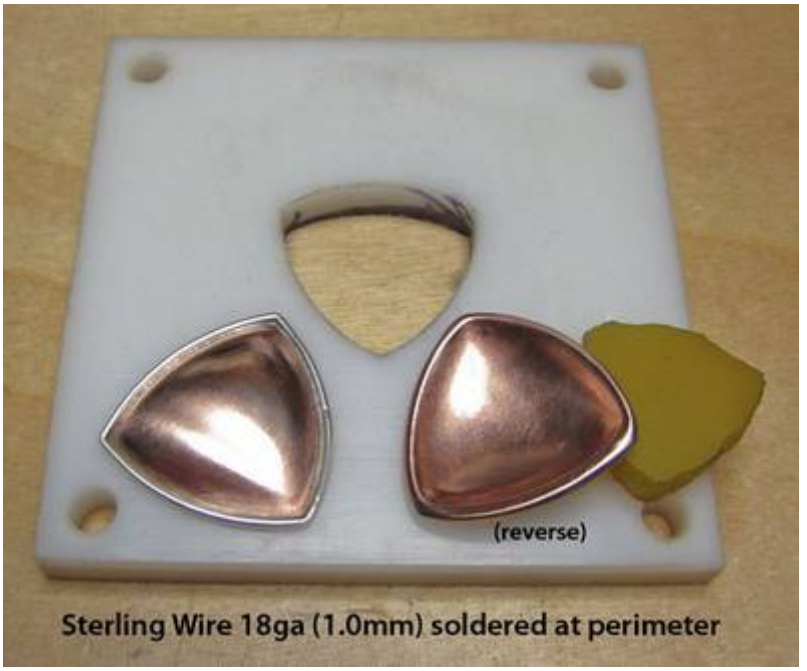
Some different shapes, mostly for colliers, made with this methode.

NonaB send some adresses from supplier where you can buy the materials:
Gum Rubber 40A Durometer, 1/4x12x12" (more than you need):
http://www.drillspot.com/products/450955/Approved_Vendor_1XWC9_Rubber_Sheet

Blue Plastic 1/4x12x12":
http://www.drillspot.com/products/522723/tivar_gra0133002030_88_sheet_stock
The medium-blue plastic (above) is dark enough to make it a little difficult to see the transferred pattern for sawing.

Delrin White Plastic 1/4x12x12" (more expensive):
http://www.drillspot.com/products/535249/delrin_gra1107002200_150_sheet_stock

NonaB also tested the methode. Here the results:



Picture left: Before NonaB cut out the form, she has soldered an 1 mm round fine-silver wire exactly around the perimeter of the form onto the supernatant sheet. Than she cut out the form. That is a perfect silver rim for enamelling.

Thank you very much,
NonaB