

Flash Drive Enclosure Kit Instructions -3/6/13

Thank you for purchasing this Flash Drive Enclosure Mold. In addition to these instructions please watch [video](#) as well. At the end of this document there are tips & techniques.

Please read them as they point out some pitfalls that you may encounter.

Assembling Your Metal Clay Enclosure

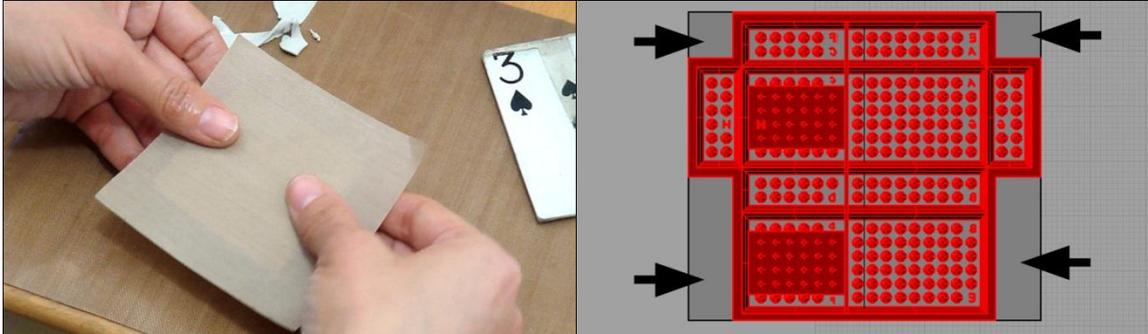
1. Lubricate mold. Begin by rolling out enough [clay](#) to cover mold. You should roll out on small [4x4 inch antistick](#) sheet while also having larger [antistick](#) sheet underneath. Clay should be about 3-4 cards thick.



2. After clay is rolled out impress mold into clay firmly. Remove any excess from around edges.



3. Flip mold with clay and [4x4 antistick sheet](#) . Peel back [antistick sheet](#) and clean additional excess clay from 4 corners. Careful when peeling sheet not to pull out clay. These 4 corners are the grey corners with arrows shown in picture below. The red areas should be left untouched.



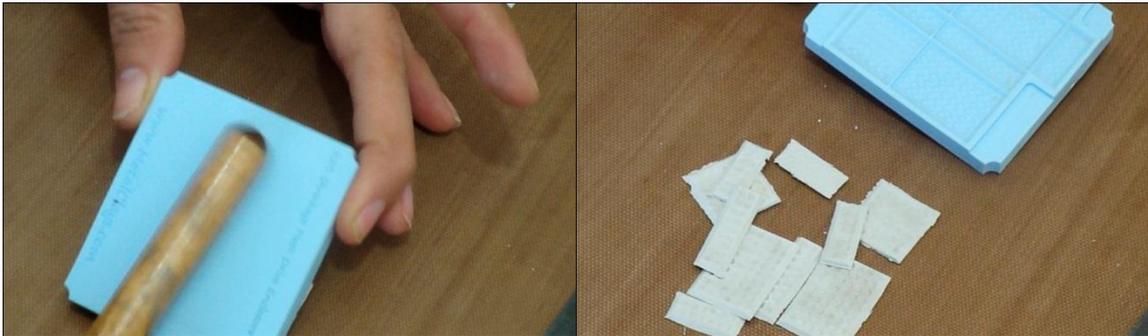
- Place 2 stacks of playing cards on either side of mold. The card stacks should be the same thickness as the mold. Place [antistick](#) sheet back on mold over clay. Now with a roller gently roll over [antistick sheet](#) and mold. The 2 stacks of cards should be at each end of roller adding balance and stability.



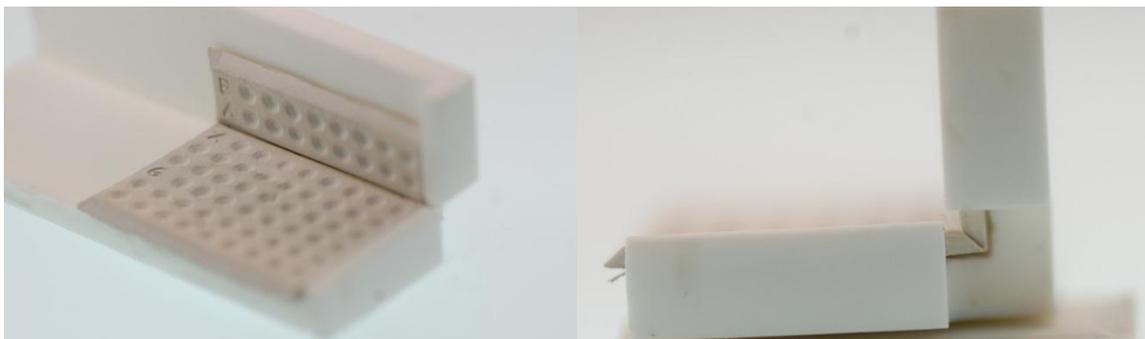
- Peel back [antistick sheet](#) and remove any excess clay. Repeat steps 4 and 5 till you have level clay in mold.
Please note: It is really important to make sure that you have really evenly worked clay into mold. If you do not see all the “letters” on back of pieces when removing from mold then something went wrong. This is more of issue on powder clays then silver. The more consistent the pieces are in thickness the more predictable the shrinkage and the less post fire work you have to do.
- At this point you can apply textures and stamps to exposed [clay](#). This side will be the outside on flash drive enclosure.



7. Place mold and clay to dry. The most failsafe way to dry without curling is to allow it to air dry overnight. [NobleClay Copper](#) and [Bronze](#) can be dried with hot plate without curling.
8. After dry, remove pieces. The easiest way, if they do not fallout, is to tap back of mold with hard handle of any small tool in your studio. Clean off any paper thin excess on edges by hand. Do not sand. Check that pieces are flat. You can usually gently bend pieces by hand.



9. Each piece has letters on it. Find the sides that have matching letters and place matching letters next to each other. Place both sides on [cradle](#) and check that they properly line up and meet.



10. Using fresh slip and [clay shaper](#) tool “glue” adjoining sides. More slip is better than less slip. We want to make sure we have solid join. Any excess slip that extrudes should be spread out on inside seam by stroking down towards [cradle](#) stop wall with [clay shaper](#).

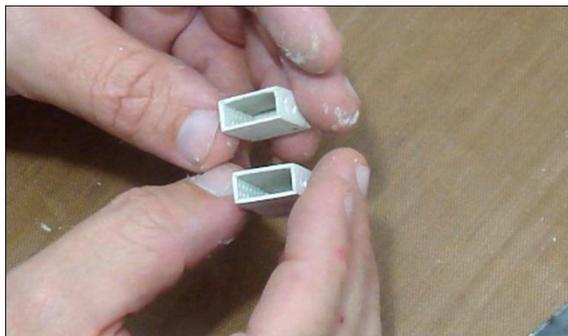


11. Make sure everything is lined up and angled correctly using [cradle](#).



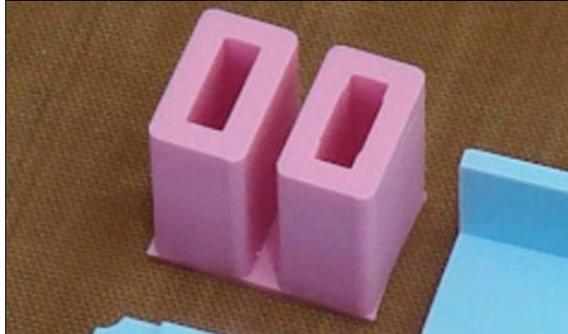
12. Repeat steps 9 to 11 until finished with assembly.

13. After both sides are assembled and dry. Check for gaps in seams. This includes inside seams. You can easily fill in gaps with [clay shaper](#) tool both inside and out. Using a damp brush you can slightly moisten seams on outside to expose gaps in seams that may be hidden due to sanding dust.



Making Flash Drive Plugs

1. Using supplied [investment](#) mix 3 parts powder to 2 parts water. You should mix very small amount (1 part = ½ tsp) in disposable cup. This material is silica free poses no health risks but a mask is always recommended with fine powders.
2. After fully mixed pour into both sides of pink silicone mold



3. Allow to dry 30-40 minutes.
4. Pushing from bottom with finger gently extrude plugs and remove. Dry fully especially when using carbon fired metal clays. You can use [hot plate](#) for this.

Firing

1. Each flash drive plug is marked “A” or “B” on one end. B should be used for bigger box and A for smaller box.
2. Place plug inside correct sides in center of box. Place in cool kiln and fire according to temperature recommended for material.
3. [Sand and polish](#) after firing as desired. Do this before installing [magnet](#).

Installing Magnet in Cap

1. In small box test fit [magnet](#) into cap. It may be tight but will fit.
2. After test fitting place [magnet](#) on tip of [flash drive](#) (centered). On exposed side of [magnet](#) place small amount of [Epoxy 330](#) on magnet and insert into cap. Careful not to get glue on flash drive. Make sure [magnet](#) is fully seated to farthest end of cap. Allow to dry for several hours.



3. Remove [flash drive](#) and make sure [magnet](#) does not come off. Place [flash drive](#) back into small box(cap). At this point [magnet](#) in cap should be holding [flash drive](#) in.

4. Place [Epoxy 330](#) glue on end of flash drive around black plastic. While [magnet](#) is still holding [flash drive](#) in small box (cap) push other end with glue into larger box. Allow to dry several hours.



5. After drying everything should be good to go.

Tips & Techniques

1. When adding or joining additional layers of clay onto box be aware that this may cause uneven shrinkage. It really depends on mass of item you are joining on. Also joining fully dry pieces to full dry box minimizes this. When this happen you may find that you have to do more post fire sanding at joining seam to fit evenly together.
2. Think out before how it will be used. For a keychain as an example you might add a chain that joins cap and body. Not only will ensure the flash drive does not get lost during heavy use it will also add a nice touch. For a pendant you might use additional [magnet](#) in bail for easy removal during shower as seen in [this video](#).
3. Always tumble before adding [magnets](#). They are quite strong and all the shot will stick to it. This can be hassle after to remove from inside cap.
4. When tumbling versus hand finishing it is recommended to tightly stuff inside of flash enclosure with saran wrap or similar concept. This will support box from caving in during tumbling.
5. You can use a [hot plate](#) to speed dry items in mold. The only issue is you must baby sit and make sure the pieces do not fully dry warped. 15-20 minutes on [hot plate](#) should get you to the point that they are dry enough to “tap” out while being still workable if you need to straighten out by hand. Once this is done you can dry on [hot plate](#) by flipping every few minutes till fully dry. The important thing to remember is the pieces need to be straight.
6. The cradle can be placed on [hot plate](#). However it should not be left for extended periods of time. It really depends on [hot plate](#) as some run hotter than others. Best way to approach is to place for 10-15 minutes with cradle and then remove item from cradle and allow too dry directly

on [hotplate](#). You will have to experiment a bit to dial in exactly what works with your equipment.

7. We have had best results when using thick slip/paste when assembling enclosure. Using water to moisten will weaken join so use sparingly.
8. Make sure inside of box is clear of any extruded slip that might prevent inserting flash drive.
9. Please remember that the molds are made for an exact shrinkage rate. There are no however metal clays on the market that provide an exact shrinkage rate. Premix silver provides the most consistent results. Dry clay such as bronze is a bit more of a challenge. How much water you mix with, firing temperature and length of fire all factor in results. For us with Goldie Bronze firing for 30min 1-fire and 60 minute 2-fire yields pretty much 9%. Also do not remove from carbon while hot from 2nd fire. This helps reduce oxidation.
10. When firing bronze and even silver sometimes you may have to use flat needle file to clean binder from inside enclosure sides after firing. Even though you may be able to snugly press in flash drive without doing this we do not recommend it. Life will be much easier if you can insert and remove drive freely during post fire sanding and polishing.
11. The [investment](#) we use has a 10% shrinkage rate. We have factored this into molds. Using other investment may produce undesirable results.
12. Sometimes your texture does not result in level surface to square in the cradle. In this case flip cradle over and use outside to join pieces on 90 degree angle.
13. We recommend watching the [video](#).
14. For us besides Silver Clay [NobleClay Copper](#) and [Bronze](#) premixed clay yielded the best results for this particular application.

If you have any questions please email us at sales@metalclays.com. Include pictures if you have.

www.MetalClays.com