Sand Casting with Chocolate

Sand casting is a method of making metal objects by pouring molten metal into a mold made out of sand. The maker presses a model of the object, called a pattern, into a tray of sand mixed with clay or resin, then removes the pattern and pours metal into the space left behind. After the metal cools and hardens, it is pulled out of the mold and the sand is cleaned off.

We can make this process easier to do at home (and more delicious!) by replacing the metal with chocolate and the sand with brown sugar.

Tools
- Small items to use to create shapes to mold out of chocolate
- Spoon and a butter knife
- Bowl
- Plastic bag (such as a sandwich bag)
- Scissors
- Microwave oven
- Refrigerator

Materials
- Chocolate that melts well, such as baking or couverture chocolate
- Brown sugar (Start with 1 lb. box or bag – you may need more if you plan to mold a large quantity of chocolate.)

What Does That Mean?
Couverture chocolate is a very high quality chocolate that contains extra cocoa butter. (32-39%).
Step 1: Gather your materials
Find items for your mold forms that are small or have interesting texture, but not many thin or fragile parts. Examples include buttons, screws or a compact toy figure. Be sure to thoroughly clean your items.

Step 2: Prepare the sugar
- Pour the brown sugar into the bowl.
- Smooth the surface with a spoon and press it down to compact lightly. Do not press it into a very hard mass or leave it too loose, try to make it somewhere in between.
Step 3: Make your mold

Press your item to mold directly down into the sugar, and pull it straight back upward.

- If it is difficult to press the item into the sugar, you may need to break it up and smooth it back down with less pressure than you used the first time.
- If the sugar crumbles immediately after you pull the item up, break up the sugar lightly and smooth it back down with more pressure than you used the first time.
- If you’re having a hard time keeping a grip on the item while you press it in, you could try adding a small cardboard handle with tape or hot glue.
- Be very careful not to knock the bowl after this step is completed.
Step 4: Melt the chocolate

- Chop or break your chocolate into smaller pieces, then put it into the plastic bag and seal the bag.
- Microwave the chocolate 30 seconds at a time until it is melted.
  - My chocolate took about a minute to melt; I checked it after 30 seconds and smooshed the bag a bit.
  - Melted chocolate is hot - be careful not to burn yourself! Ask an adult to help you with this step, and let the chocolate cool down a bit if it’s too hot to handle easily.

Alternate Ways to Melt Chocolate

Melt the chocolate in a microwave-safe bowl, stirring after each 30 seconds. When melted, carefully pour or spoon it into the plastic bag. [Watch this video for instructions.](#)

Melt the chocolate in a double boiler (a pot placed over a pot of boiling water) and carefully pour or spoon it into the plastic bag. [Watch this video for instructions.](#)
Step 5: Pipe the chocolate
Snip a corner off the plastic bag with scissors and squeeze the melted chocolate into the mold shape in the brown sugar.
- If you have extra melted chocolate, squeeze a small blob onto the surface of the sugar which you can use to check if your chocolate has solidified.

Step 6: Cool the molded chocolate
Gently move the bowl into the refrigerator and let the mold cool until fully hardened.
- Cooling time depends on the size of your mold - this bolt (pictured) took about 30 minutes. Larger shapes will take longer.
Step 7: Clean the molded chocolate

- Remove your chocolate from the refrigerator when solid.
- Unmold your chocolate by gently breaking away the brown sugar. Use a butter knife or pastry brush to brush away bits of sugar sticking to the chocolate.
- You can also rinse away sugar under water that is cold enough not to melt the chocolate.
- If the chocolate begins to melt in your hands, refrigerate it for a few minutes to solidify it before continuing to unmold it.
Step 7: Enjoy!

Tips

• Melted chocolate can be very hot! Have an adult help you when working with it.
• Don’t leave your molded chocolate in the refrigerator too long. The brown sugar will harden, making it difficult to unmold your chocolate.
• Brown sugar can be reused for other molds. If it becomes hard, microwave the sugar in a bowl with a damp towel or along with a second bowl of water, then break it up with a fork.

We’d love to see photos and hear ideas about your results on this and other projects – just email us at info@makeshopshow.com.

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