

The Safe and Helpful Guide to Recycling Your Own HDPE Plastic #2

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Interested in creating your own plastic objects, but don't know how? Follow the steps below to successfully melt and re-mold your own plastic using HDPE plastic #2. The object molded in this example will be a cutting board, but you can make whatever you want.

Warning: Do not use plastic objects for this project that have originally contained harmful chemicals in order to make items intended for consumption (food, drinks, ect.).¹

1. The first and most important step is to collect and wash a few plastic bottles. This picture shows the bottles—stripped of their labels, and washed thoroughly to ensure all contents have been removed—that were used to make a 100% recycled plastic cutting board.

2. After the bottles have dried, inspect the bottles for any adhesive leftover from the labels. A simple solution of vinegar along with a sharp utensil can rid the bottles of this residue. Then proceed to cut the bottles into small pieces as shown in the photos. Pay attention to the different pieces of the bottle. Often times the plastic cap is a different type of plastic than the bottle. An SPI code should be visible on each individual piece.



¹ Please refer to the section titled “Plastic and its Functionality” in this project’s abstract for a more details.

3. Once enough bottles have been cut, set your oven to 180°C. Since HDPE poorly absorbs smells, stronger smelling contents will release robust odors during the baking process. For this reason, make sure your oven is in a well-ventilated room. Arrange the plastic shards in whatever fashion you would like on a pan lined with baking paper. You can also reduce the size of your plastic even more by placing the shards in a food processor and grinding it down into a dry pulp. In this example, a food processor was not available, and the shards were arranged by color using a small glass as a model for a hole.



4. When satisfied, place plastic in the oven for about 10-15 minutes, or when the plastic is gooey. Remove the plastic from the oven, make any necessary adjustments using heat resistant gloves, and let it cool. For this example, the plastic was cooled, flipped over, and placed back into the oven for molding purposes.



Congratulations! You have now learned how simple it can be to recycle your own plastic by using empty bottles that were originally destined to be thrown away.

