



Making Edge Guards for Hand Tools Using Hand-Moldable Plastic

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<https://learn.adafruit.com/hand-moldable-edge-guards>

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Overview



I have recently been practicing some sharpening techniques that I picked up from [Carl Swensson](#) (), a great Baltimore area woodworker. After spending hours sharpening my chisels, I found myself looking for a way to protect the edges from nicks and chips while transporting them, and also wanted to protect myself from the very sharp tools, since I recently lost a chunk of my index finger to a freshly sharpened blade.

After some searching, I found a great article by Chris Schwarz about [using Plasti Dip and masking tape to make edge guards](#) (). I was unable to get the snug fit I was looking for using his method, and the Plasti Dip was nasty to work with. Fortunately, I noticed that [low-temperature hand-moldable plastic](http://adafru.it/2504) (<http://adafru.it/2504>) was recently added to the Adafruit shop, and decided to give it a try. The results were exactly what I was looking for, and the process couldn't be simpler. Let's get started.

Forming the Guard

Before we begin, you will need to gather a few items:

- BBQ or salad tongs - for retrieving melted plastic from the hot water
- Chisel - or other edge tool
- Scissors
- Low temperature thermoplastic pellets - a handful of pellets should be enough for one or two chisels
- A microwave safe container - this should be big enough to hold a couple cups of water



Heating the Water

Heat a couple cups of water to around 150 degrees Fahrenheit (65 degrees Celsius) in a microwave safe container. It took about 1 minute 30 seconds in my microwave to warm up the water to the proper temperature, but your results may vary depending on the microwave you use.



Melting the Plastic

Next, add the handful of plastic pellets to the heated water. It will take a couple minutes for the pellets to melt. If they don't seem to be melting, add more hot water to the container.



The pellets will be ready to form once they have turned from opaque to transparent. Stir the pellets into a single melted glob, and grab the melted mass with your tongs. **DO NOT REACH INTO THE HOT WATER WITH YOUR BARE HANDS.**



Forming the Guard

Massage the melted mass until you can no longer see the individual pellets. Stretch the plastic into a flat sheet about twice as wide as your tool, and twice as long as you would like to make the guard. The flat sheet should only be about 1/8" (3mm) thick, so rip off any excess material if you have more than you need.



Next, fold the flat piece of plastic over the chisel as shown in the video below. Make sure to leave enough padding on the edge of the chisel so it won't cut through the end of the guard. You may want to dunk the flat piece back in the hot water for a minute before doing this step to make sure it is easy to fold over the chisel.

You will need to wait for the plastic to start to harden a bit before removing it from the chisel. Wait for the guard to turn slightly opaque like the picture below, and then remove it from the chisel.



Do not leave the guard on the chisel for more than a minute or two at this point, or your chisel may start to rust. Dry your chisel off, and set it aside.



Trimming the Guard

The last step will be to trim the open end of the guard before it completely hardens. Use your scissors to shorten your guard to the desired length. The discarded plastic can be melted again, so make sure to save the trimmed waste for future projects!



Final Thoughts

Make sure to allow your guard to fully dry before placing it back on your tool. Any remaining water in the guard may cause your tool to rust.

You should always coat your tool in jojoba, camellia, or mineral oil before placing it in the guard to help prevent rust. Enjoy your new edge guards, and stay safe!

