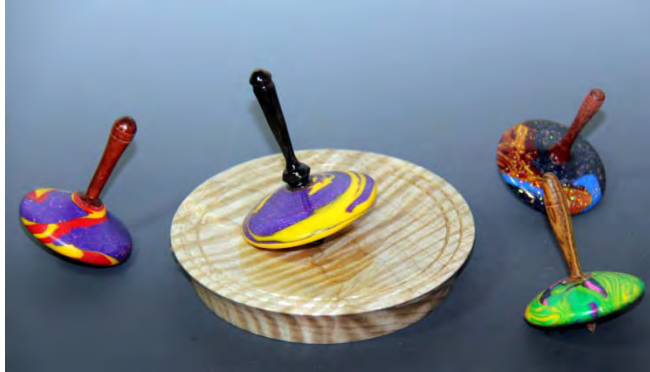


# Turning Polymer Clay

by Walter Wager



Starting with the clay - Polymer clay (polymer polyvinyl chloride) comes in many different brands and each has different characteristics.

There is a ton of information about the different characteristics of the different clays on the internet, and so I will stick with some simple recommendations here. I generally use the Premo (brand name) clay, but you can mix clays for different colors and characteristics as long as you bake them according to the directions on the lower temperature clay - but I am getting ahead of myself. Our goal is to produce a disk of hardened clay that has the size and colors we want in our top.

Polymer clay is stiff coming out of the package and has to be "conditioned". This means that it has to be squeezed, rolled, and manipulated until it is soft enough to work. Different clays require more or less conditioning. I use a pasta machine made for clay crafters.

You don't have to have a pasta machine, you can use a rolling pin and work the clay on a flat surface.

After conditioning the clay it gets pretty soft and is easy to work with.

To shape the clay disk, make yourself a disk press. Mine is made from an old vitamin bottle. Cut out the bottom, drill a hole in the top, and turn a plunger that fits inside. When you make the plunger leave a protrusion on the bottom to identify the center of the disk.



Another device I use is an extruder. Putting conditioned clay in the extruder you can get different profiles and strings of clay that you can work into the clay disk.

I pack the conditioned clay into the disk press, adding different colors or patterns, Pushing the plunger expels the soft clay disk.



Next, the clay disk has to be baked to harden it.

I use a toaster oven, and bake several disks at a time. Different clays require different baking temperatures and the thickness of the disk determines the amount of time they have to bake. The Premo clay should bake at 275F, for 30 minutes, for each 1/4" thickness. My disks are 1/2" thick, so I bake them for one hour. If you mix clays with different baking temperatures, bake them at the lower temperature. For example if mixing FIMO soft with PREMO bake at the lower FIMO temperature of 230F. Better yet just use one brand or the other.

Toaster oven thermostats are notoriously wrong. I use an external oven thermometer (notice probe in oven) to adjust the thermostat.

I generally use some type of exotic wood for the stems of my tops, for example, ebony, cocobolo, blood wood, canary wood. The blanks are about 1/4 inch square and about 5" long. I start by securing about two inches of the stem in a pigot jaw chuck.



Turn the bottom inch of the stem round where the clay disk will be glued. Using a drill guide as a gauge, I can be sure I will have a nice tight fit when I drill a hole through the clay disk.

Drill a hole to match the size of the stem, and glue the disk onto the stem using thick CA glue.

Turn the disk into the shape of the top - notice all the colorful shavings. I turn a short shallow curve on the bottom, a low center of gravity makes it spin longer.



Wet sand the clay disk with wet or dry sandpaper, or micro-mesh cloth. I dip the sandpaper into water and then apply it to the disk. Using Micro-mesh, you can sand to 1500. Depending on how well you conditioned the clay, and removed air bubbles, the surface of the clay will be smooth with a semi-gloss finish.

Now extend the top from the spigot chuck. I support the disk in a cup live center with a piece of paper towel between the disk and the center. And turn the handle.

I buff the finished piece using a Beale buffing system. If you are going to put a finish on the polymer clay, don't use a spray lacquer. This will melt into the polymer clay and make it sticky. You can dip it in shellac, as alcohol won't melt the clay. I have also heard that brush on varnish is satisfactory as a finish.