

## Vapor Treating ABS RP parts

Treating ABS parts with acetone is almost as old as RepRap itself, but usually this has involved either dipping the part into liquid acetone, which causes white streaks in the parts, or brushing the acetone onto the part with a slurry mix, which can work very well but tends to be a messy process.

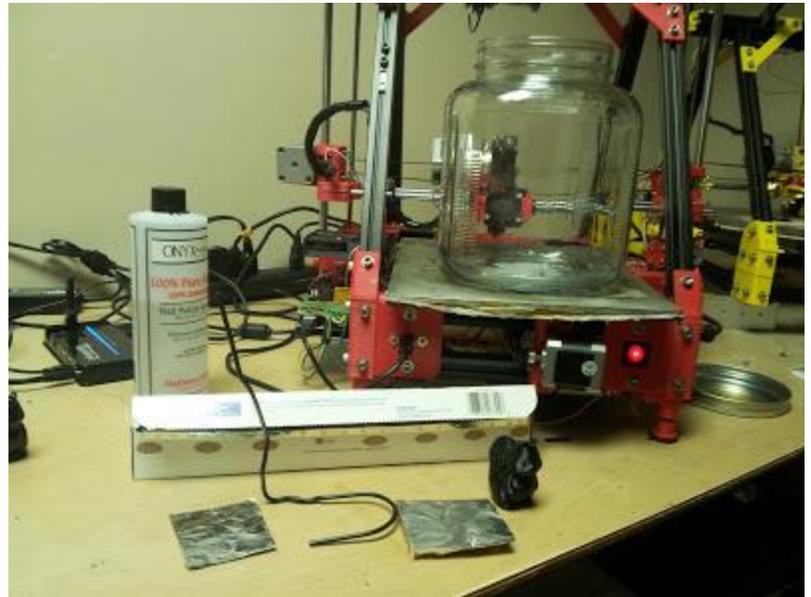
Unforgettably I am a horrible mixture of cheap and impatient, so I had to figure out a way to do this for little or no money out of pocket. To do this process you will need your RepRap's Heated Build Plate (must be able to reach 110C), a Glass Jar, Some Aluminum Foil, and a hanger to bend into a hook to get the parts out with.

First place your glass jar on the heated build plate and put a liberal amount of Acetone into the bottom of the jar (3-4mm deep). Initially you need to ramp up to 120C, especially if you have a heavy jar. As the jar comes up to temp you will see the meniscus from the edge of the vapor cloud slowly creeping up the jar. Once the vapor is to the top of the jar, turn the plate back down to 90C for the treatment.

Place your sheet of aluminum on your table, and your part on the sheet. Lower the object into the vapor bath (very carefully, you don't want it falling off).

Leave the object in the acetone until you are happy with the amount of smoothing (the object continues to smooth out over the next few hours).

Once the parts are in process you can not touch them at all, the easiest way we have found to get the parts in and out of the jar is to fold aluminum foil into a makeshift table and use another smaller sheet of aluminum to act as a base for the part. You can fish the parts out of the jar using a wire coat hanger bent into a makeshift flat hook.



When done, carefully remove the object from the bath. If you're done processing put a lid on the jar loosely and as the vapor cools it will condense back into liquid to be stored in your acetone jar again. Allow the part to sit for another ten minutes, the surface will be very squishy while the residual acetone dries off.

