

RTV COATING INSTRUCTIONS: 1. first clean the boards. Use some alcohol and a small brush (an old toothbrush) to clean off all the soldering flux and greasy fingerprints. Then use compressed air to dry the boards. (make sure the boards are completely dry of the alcohol before applying the RTV or primer). Apply the primer? (I don't know much about this yet, I haven't used it). 2. Use triple beam balance to measure out (X) grams of RTV, and add (X/10) grams of hardener to the RTV in a container (one of those red plastic fraternity cups, or a paper coffee cup would work well). (note: mix about 10 grams of RTV per board to be coated, this should be a little bit too much so there is enough to cover everything). (workable time is about 4 hours, so no hurrying is needed) 3. Mix well, and pump down in small vacuum chamber. (Will foam up a lot!). You will have to pump down until the foam reaches the top of the container, then turn off pump, and either wait for the foam to go down, or let in a little air to collapse the foam, and then pump down again, until foam reaches the top of container, and repeat until the foam collapses on its own with the pump on, and the RTV is clear and free of bubbles. Its now ready to use. 4. Holding the board above one cup, use a small spatula (a popsicle stick) to apply the RTV. Just put it on pretty heavy and let it run down both sides of the board, then flip the board around 180 degrees and do the same thing to get the coating on the other side of components that may not have been covered the first time. Then place board in cup and let sit for about 5 to 10 minutes to let the excess coating run off into the cup, so that it can be used on the next board. (use care not to get coating into the connectors!) 5. (optional, but I would do it) Then place the coated board, in a cup, into the small vacuum chamber and pump down on it for maybe 5 or 10 minutes, to remove small bubbles. (some foaming may be noticed on the board, but it isn't a problem, if it doesn't go down on its own with the pumping, it will go down when you let air back into the chamber). 6. Preheat your cardboard oven to about 60 degrees Celsius, by setting the variac to about 75-80. and turn on the fume hood. Once your oven is up to temperature, place the pumped on boards in the oven. (hanging them, with paperclips, by the connector holes works well, but you should place some paper towels under them, because the heat will cause more coating to drip off, even if no more is dripping off at room temperature. (At 60 degrees C. they will cure in about 6-8 hours, but leaving them overnight works well also