

Diamond Buff Compounds

So far as I know, I'm the first knifemaker to make up my own diamond buff compounds for use with buffing wheels. (Maybe just the first to go public? Maybe not the first? Whatever.)

These are my postings on Blade Forum from Jan 8 2026

I made up some new compound yesterday, keeping track of the amounts. I've been working with the 7 micron in the shop this morning, and it is working really well (even better than the first batch of 7 micron). So:

7 micron:

Beeswax: 21.2 grams

Stearic Acid 10.3 grams

diamond powder 100 grams

yield was around 3 1/2 cu in of compound (for sizing your mold). I used icicle pop silicon molds, worked well. I'm sure the tenths of grams don't matter, but fwiw that is what the components weighed, actual.

.5 micron (I haven't used this, but it seems right at the blend and pour. I'll post actual results once I've used it)

Beeswax 25 grams

Stearic Acid 12.5

diamond powder 80 grams.

I didn't weigh out the diamond additions, but I did weigh one of the packages, and it was consistent with the declared weights from the vendors.

At this point I'm using the diamond even on steels where aluminum oxide works ok. I just plain like it a lot better than any conventional compound I've ever used (for steel polishing, soft materials are a different matter).

The stearic does seem to make the compound a bit less sticky in use.

REK's comment about maximizing the amount of abrasive per amount of binder is exactly right, (in my experience now, with different ratios). We only want enough of the binders (molten) to allow it to pour, no more.

Post 2:

REK Knives said:

excellent! so do you feel that is a good ratio so far on the 7 micron bar? does it apply to the buffing wheel well?

I'm probably happy with this ratio for the 7 micron (ie won't bother changing it further). Both this

recipe and the original beeswax-only apply really well to the wheel (and can be used very sparingly). This version has the compound sticking to the blade a little less, it runs as a dryer compound (which is good). The previous compound run where I made the 400x and 10,000x bars had too much beeswax. They still ran ok, but nothing like as nicely as this recipe. I'm probably not going to bother with the 400x in future, the 7 micron takes care of 20 micron grinding scratches very easily, even in the hard high vanadium steels.

The 7 micron finish reads like a full mirror finish, you can just barely make out the buffing scratches with close examination. I'm curious to see how the .5 micron will deal with the 7 micron finish. Will know shortly.

This is based on 6" stitched cotton wheels running at 3600 rpm. I have not used the hard corrugated buffing wheels yet. So far, I don't have a role for them.

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Post 3:

A few additional notes:

The .5 micron is still somewhat stickier than I would prefer (but a huge improvement on the 10,000x predecessor). The .5 micron abrasive size does appear to be able to remove the polishing marks from the 7 micron bar. The next time I make up .5 micron compound I'm going to try 60% beeswax 40% stearic (for the same total binder to abrasive ratio). It will be a while, because I'll use up this bar first, but when I have results on the dryer variant of the .5 micron I'll post them. If anyone makes up .5 micron from the recipe above, one secret does seem to be to apply it even more sparingly. It really doesn't take much to work.