

Sharpening chisels

I get no joy from sharpening. It's just something that I sometimes have to do before I can get to work. In the best of circumstances, sharpening is happening in the shop where it's warm and water is available. But that's not always the case.

The last job site I worked on had no heat and no water when I started. I was building and restoring windows, work that required sharp chisels. With no water and in freezing winter temperatures, my water stones were useless and couldn't be stored on site even if I did bring my own water—when water stones freeze, they break. I decided to look into a new system that was less fussy. I also wanted it to be portable and affordable. And of course it had to get my chisels as sharp as I needed them to be.

After experimenting with a few different methods, I settled on the system shown here, which starts with a double-sided diamond plate. This one is from Trend and it has a 300-grit side and a 1000-grit side. I use Lapping Fluid, also made by Trend, to lubricate the plate. The diamond plate flattens the back of the chisel (if necessary) and cuts a sharp microbevel on the front of the chisel. Not only are these diamond plates more durable than water stones, they don't require flattening or other maintenance.

It's worth noting that when the diamond plates are new, they cut very fast. Sometimes it takes only a couple of passes to sharpen a blade (this is a good time to flatten backs if you have any tools that need it). With use, the plates begin to cut slower until they plateau and it takes 10 to 20 passes to sharpen a chisel. But unlike a water stone, you likely won't wear a diamond plate out altogether, unless you do a lot more work with your hand tools than I do.

The next part of the system is a Dia-Paste Diamond Compound Kit. The kit comes with 1-micron, 3-micron, and 6-micron pastes. These pastes are often applied to a leather strop or a small steel plate, but I find



Stay sharp for under \$200

Both available online, the Trend diamond stone costs about \$125 and the Dia-Paste Diamond Compound Kit is about \$30. An 8.4-oz. bottle of Lapping Fluid is another \$30. You probably have the rest of what you need on the job site or in your shop.

STEP BY STEP

PREPARE THE POLISHING BLOCKS



1 Labels are helpful. Though the diamond pastes are color-coded, after some use the MDF blocks will turn dark grey and black. To eliminate confusion, label the blocks "coarse," "medium," and "fine" before applying the paste.



2 A little bead is all you need. Press a pea-sized amount of diamond paste into the center of the block. If your blocks stay clean and free of debris, you won't have to add more paste for a while. When it begins to take a long time to polish your tool, recharge the blocks with more paste.

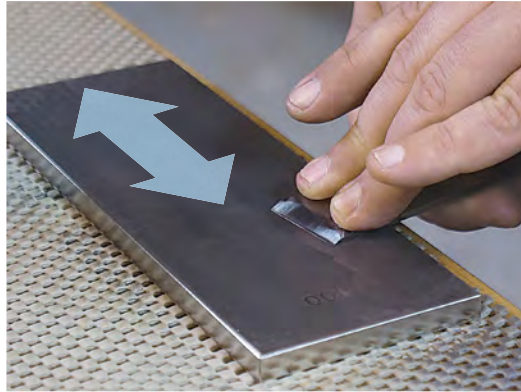
3 Spread and polish. Use the back of a chisel to spread the diamond paste all over the block. If you have already flattened the back of the chisel on the diamond stone (see next steps), you can spread the paste and polish the back of the chisel at the same time.



FLATTEN THE BACK OF THE CHISEL

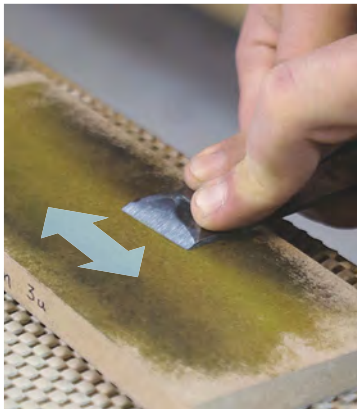


4 Always lubricate. Whenever using the diamond plate, lubricate the surface with Lapping Fluid. This oil-based liquid will make it easy to move the chisel across the plate and float away the metal filings to keep the plate cutting fast. Don't use water or your tools and the plate can develop rust.



5 Side to side. Flatten the back of the chisel by stroking it side to side on the 300-grit side of the plate until the back of the tool is perfectly flat at the leading edge. Then use the 1000-grit side of the plate to remove scratches left by the coarser side of the plate. You shouldn't have to flatten the back of the chisel again unless it gets damaged from use.

6 Polish to a mirror finish. Polish the back of the chisel, working from the coarse paste to the fine paste and toward a mirror-like finish on the steel. Make sure to wipe the blade after each paste so you don't contaminate a finer paste with a coarser one.



SHARPEN THE BEVEL

7 Pull backward. Place the chisel's bevel flat on the diamond stone, lift the handle just a bit, and pull backward to create a sharp microbevel at the tip. This only takes a few strokes with a new diamond stone or 10 to 20 strokes with an older stone. Continue until the blade is sharp and a burr develops on the back of the bevel. Knock the burr off in two steps: First, set the back of the chisel flat on the 1000-grit plate and pull backward. Then, again on the 1000-grit side, stroke the back of the chisel side to side until the burr falls off.



STEP BY STEP

that they work really well when applied to a piece of MDF. The paste imbeds nicely into the porous material, and I can always find a useable scrap of it lying around the job site or my shop.

This method of sharpening keeps my tools tuned on a day-to-day basis. If a blade gets nicked or damaged, I'll have to grind out the damage on a bench grinder before sharpening. And without a honing guide, this system can lead to an out-of-square blade over time, which will also require an additional presharpening tune up. But this is true of other sharpening methods as well.

Although this method arose from a need for on-the-go sharpening, I now use it in the shop, too. It keeps my tools plenty sharp for all of the carpentry and woodworking tasks that come my way.

Ben Brunick runs Chalkstone Woodworking in Yankton, S.D. Photos by Brian Pontolilo, except where noted.



To see a video of this sharpening technique, visit FineHomebuilding.com/magazine.



8 Polish the microbevel. Repeat the sharpening process on each of the polishing blocks. Remember to wipe off the chisel between each one.