

USING YOUR DRY DIAMOND POLISHING PADS FOR POLISHING GRANITE AND CONCRETE

The pads you have bought contain diamonds embedded in the resin. Running them against abrasive surfaces such as granite and concrete will file down the resin and expose the diamonds therefore the pads will be self sharpening unless they are used on glass. For softer limestone such as marble or travertine, you'll need to run the pads at lower speed or pretreat the surface with soap water to avoid color transfer.

The pads work with a Velcro holder, most of which having 5/8-11 thread. This will fit any standard polishers except the very old Makita polishers or certain metric polishers made for Europe and South American market. It will also fit high-speed grinders, but **DO NOT USE WITH HIGH SPEED GRINDERS UNLESS IT IS A VARIABLE SPEED THAT CAN RUN SLOWER THAN 5000 RPM.**

Dry pads can cut granite and concrete very aggressively due to the higher concentration of diamond. For longer lasting, use slower speed or apply little to no pressure to the polisher when using lower grits. Dry polishing generates more frictions and heat thus running too fast or pressing too hard on the polisher will result in sheering off many diamonds before their useful lives are up. We also supply a turbo grinding cup if you plan to remove a lot of material at lower grit. The grinding cup option may take longer to cut, but is cheaper overall.

Mount the Velcro holder to a polisher and then mount a pad to it. To make sure the pad will hold, shake it in two different directions to lock into place. We supply three different types of Velcro holders for dry polishing:

1. Plastic & Foam Velcro holder can conform to small bents and dimples and recover its shape
2. Rubber semi-rigid Velcro holder which can bend a little if it is forced to
3. Aluminum rigid Velcro holder which does not bend at all for perfect straight lines or flat surfaces

Grit #50 and #100 are designed for rough cut such as filing down rough surfaces or removing the top cream layer of concrete to expose aggregates. Constantly move the polisher around preferably in circular pattern like waxing a car to dissipate heat. This will also avoid scoring a circular pattern into the surface. Recommend speed of 1000 to 2000 rpm for these pads.

If your surface is already smooth then start with grit #200 or higher. Grit #200 will remove all big scratches, while grit #400 will remove all small scratches. Remember to remove polishing dust as they may contain bigger diamonds that will continue to scratch the surface as you go to higher grits. Use higher speed up to 5000 rpm as you go to higher grits.

After polishing with grit #800 dry, there should be no scratches left and the surface should begin to shine. We recommend that you treat the surface with densifier to fill in all the pores and harden the top layer. Without densifier treatment, further polishing may not make any difference. We supply a two-part densifier that can be used to fill bigger pores as well as densify and seal the top surface allowing granite and concrete to be polished to a shiny mirror finish. Densifier forms real stone to fill in the pores of the treated surfaces so it will not melt or burn like wax or epoxy. For more information check out our website: GranitePolishingPads.com!

Continue polishing with grit #1500. After #1500 the surface should reflect. Then finish off with grit #3000. We also have a black and white buffing pads for dry polishing if you are still not satisfy with grit #3000. For short term shine, the surface can be buffed with beeswax. .

DENSIFIER USER GUIDE (1 Pint: 2"x8" or 3"x5" bag; 1 quart: 4"x6" bag)

- Content:**
1. One big bag of granular crystal powder that looks like sugar: this is your densifier.
 2. One or more smaller bags of chalky powder: these are the curing compound.

Prepare Densifier Dissolve densifier in the purest water you can find such as deionized water, or purified drinking water. Add about $\frac{3}{4}$ final volume initially, dissolve all the crystals then top it off to the final volume. This solution is quite caustic so the best container to store in is a glass container. Keep air tight in a warm place and handle with care (gloves and safety glasses recommended). If this solution gets on your skin, rinse off immediately and neutralize the affected area with lemon juice or vinegar.

Prepare Curing solution: Put 1 teaspoon in a gallon size container and fill up with cold tap water. Shake well and then let the excess powder settle for 10 minutes. Collect the solution into a spray bottle for use.

Pre-treatment: with porous granite and concrete

- For concrete and raw granite surface, it may be necessary to pretreat after polishing with grit #200. To pretreat, dry out the surface completely using a hair dryer or let the sun shine on it, dilute just enough densifier for immediate use: 1 volume densifier + 2 volume curing solution and brush it onto the surface. Brush wet spots around if one area dries out before the others.
- Let it soak in and dry out completely, then spray some curing solution on, let it dry out again, then spray some more curing solution on and then cover with a sheet of plastic for at least an hour or just spray more curing solution on when it dries out. Then continue polishing with higher grits.

Densifier treatment:

- After grit #800, if you polish with grit #1500 and the polished area does not shine and reflect, then stop and treat with densifier before continuing.

Prime the surface: Dry the surface completely (use a hair dryer to blow dry one area at a time if you are indoors, expose to direct sunlight if you are outdoors) and then spray some curing solution on to wet the surface. After 5 minutes, wipe off the excess and let the surface dry. Blow dry the stone completely, and spread a thin layer of densifier onto the surface using a brush or squeegee and let it soak. When this layer has almost dried out, squeegee any wet spots around to fill pores and dry spots. When this layer has dried completely, but it is not smooth to your liking use a small rag soaked in densifier to wipe the surface smooth. Let it dry naturally, once the surface dries smooth to your liking, you are ready to cure it.

- Dry out the surface and spray curing solution on just enough to wet the surface: When an area has dried out, spray some more on and repeat at least a few more times after the surface dries out. After about 5 sprays, you can cover the surface with a sheet of plastic to keep it from drying out overnight. It's best to let it cure for a day or longer. Add more curing solution to any area that has dried out. Curing is faster at higher temperature.

Tips and tricks:

- The only part of densifier and curing solution that really does the work is the one that soaks into the stone or trapped in pores on the surface. Therefore it is very important to dry the stone completely before spreading densifier or spraying curing solution on. Anything that soaks in will react and form stone crystals filling pores making the top layer of your stone much denser. The process takes time so be patient and let it cure for at least a day or two. If you are working with marble or concrete, then priming with curing solution is not necessary.
- Most pre-fab granite slabs today already have a smooth surface that you should avoid treating unless absolutely necessary. Treat only newly cut, ground and polished areas. An area such as pre-fab polished surface will need to be primed multiple times with curing solution before densifier can work. If the surface was waxed and does not soak water, then densifier won't work until the wax layer is removed.
- Densifier solution can also be used as a cleaner/sealer so wipe a small amount on a dry surface occasionally and then wipe it off after 5 minutes with a damp rag. You can also put on a clear coat by alternating between wiping on curing solution, then wiping on densifier, then curing solution...