

# Polishing Process

## Best Practices





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# 1. The perfect blend for a Diamond Polishing Pad Set from POLISHSURF

POLISHSURF is a rapidly growing brand in the Power Tools industry that aims to inspire and provide a fantastic sense of satisfaction at the end of each polishing process. The 4-inch wet/dry Set of 11 x Diamond Polishing Pads and 1 x Velcro Rubber Backing Pad was designed to provide the perfect blend of high quality diamond pads and number of pads per grit that will allow to increase your efficiency and get outstanding results for your projects. Our product satisfies the needs of highly skilled professionals as well as amateurs in the business. Being Easy to use, suitable for both Wet and Dry usage and covering almost every stone surface from Granite, Concrete, Marble to Quartz, Terrazzo and Travertine, our Set is the ideal product for Do It Yourself projects.



## 1.1 Product Description

4 inch Wet/Dry - Set of 11 x Diamond Polishing Pads and 1 x Rubber Backing Pad that is specially designed for a Variety of Surfaces:

- Concrete Countertop Surface and Edge Polishing
- Granite Counter Edge Polishing
- Marble Counter Edge Polishing
- Quartz Counter Edge Polishing
- Terrazzo Concrete Floor Polishing

The set includes:

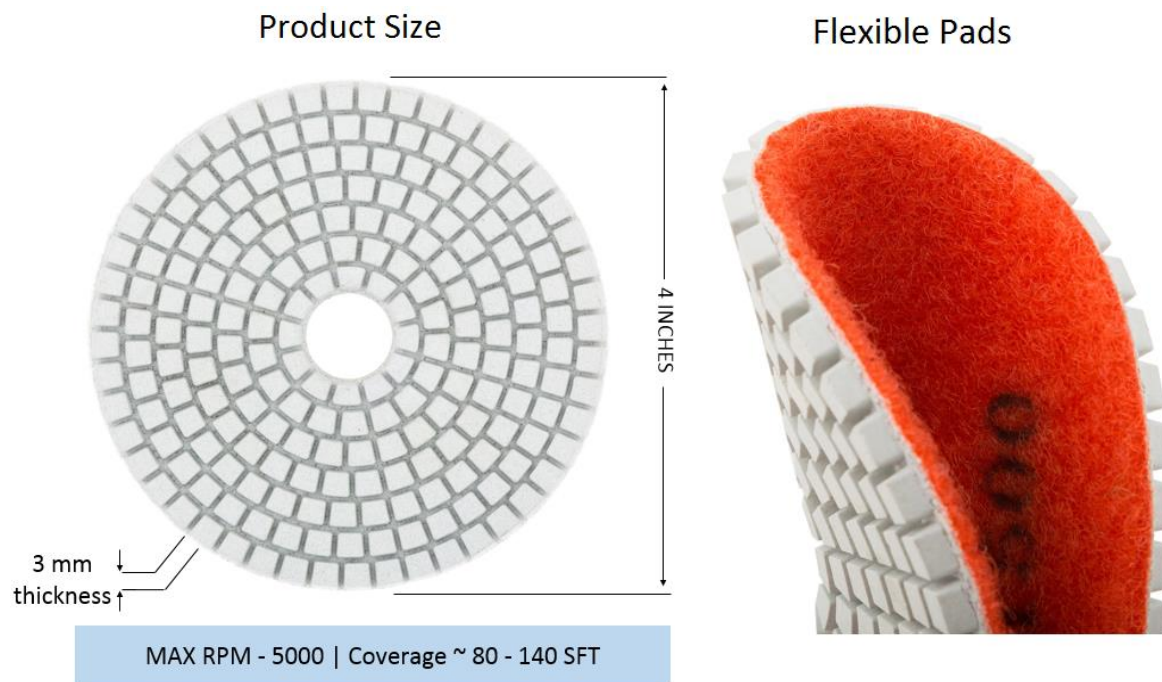
- 3 Pads x Grit 50
- 3 Pads x Grit 100
- 2 Pads x Grit 200
- 1 Pad x Grit 400
- 1 Pad x Grit 800
- 1 Pad x Grit 1500
- 1 x Rubber Backer Pad 5/8" – 11 thread

The Pads are made for both Dry and Wet usage. It is recommended to use Water above Grit 200 to achieve outstanding results.

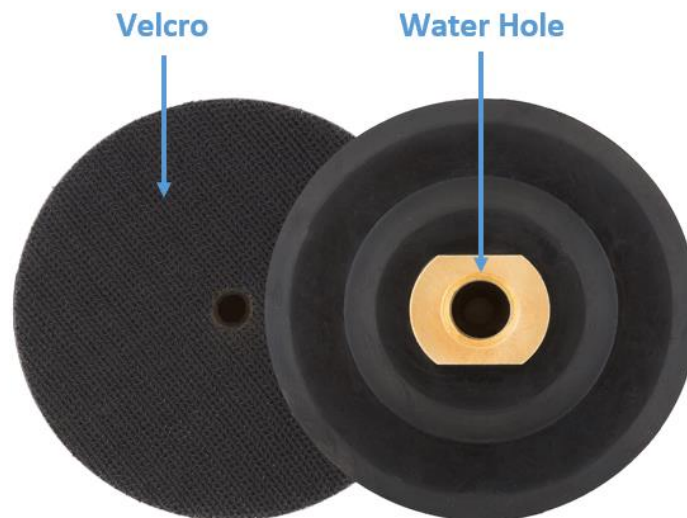




## 1.2 Technical Specifications



### Hook and Loop Backer Pad



### 1.3 To achieve the Highest Value for You



**Increase Your Efficiency**

The Quantity of each Grit was tested and optimized to provide the perfect blend for an 11 Pcs Diamond Polishing Pad Set. The Lower Grit Pads (50, 100, 200) are perfect to remove heavy scratches and the Higher Grit Pads (400, 800, 1500) are suitable to achieve shiny finishing. This Set contains a suitable number of Lower Grit Pads that are used much more intensive than the Higher Grits, this way maximizing the coverage and utilization.



**Ensure Your Peace of Mind**

Our Set contains a high-quality Velcro Rubber Backing Pad designed with an Internal Water Hole, making it perfect for both Wet and Dry Polishing. The Variety of Surfaces that can be polished with the 11 High Quality Pads covers Granite, Marble, Quartz, Concrete, Terrazzo, to ensure the necessary Versatility. The Pads are Colour Coded per Grit, being easy to identify and avoiding any confusions during the process.



**Keeps You Satisfied**

Our Diamond Polishing Pads have High Concentration of Diamond that assures durability and a perfect Polishing Process. The Pads are Flexible, Easy to Use on all kind of edges (demi, half bullnose, full bullnose, ogee, bevel) and are designed to polish countertop surface, counter edge and floor surface for high gloss finish. Your surface will have a shiny gloss at the end of the polishing process, giving you a high sense of satisfaction.

## 2. Safety Instructions

We recommend you follow the safety rules before starting the polishing process:

- Use variable speed polisher/grinder and **DON'T** go over 5000 RPM
- Use safety glasses
- Use protective mask to be safe from dust
- Use protective gloves
- Read all warning for the electric polisher and follow all recommended cautions and warnings



Recommended items when starting the work:

- A complete set of 4-inch diamond polishing pads (Grit 50, 100, 200, 400, 800, 1500 grits)
- 4 Inch rubber hook and loop backing pad with center hole
- Work Table
- Clamps (to secure the slab on the table)
- Cleaning towels (to clean the surface and remove any debris)
- Water (a bucket or a sprayer)
- Variable Speed Polisher or Grinder
- Sealer (for your specific surface)



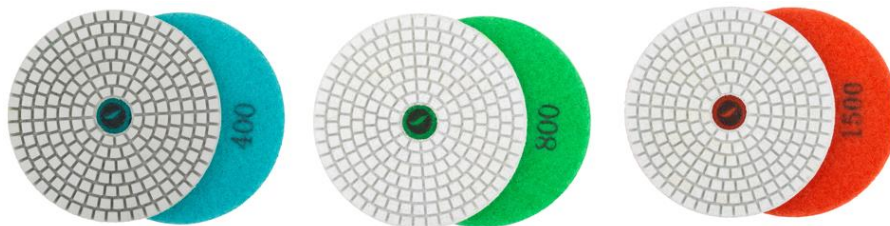


### 3. Polishing Process Step-by-Step

1. Use the right size clamps to firmly secure the material slab or tile on the work table. If you consider necessary, mask part of the material which is being exposed to water by using a masking tape. Some materials like granite are porous and absorb water quickly.
2. Inspect carefully the material slab edges. A profiled or saw edge may have some sharp and heavy scratches. Smaller grit sizes (50, 100, 200) are perfect to remove the heavy scratches and higher grit sizes (800, 1500) are suitable to achieve shiny finishing.
3. After making sure the polisher is switched off, attach the backing pad to it. Open the diamond polishing pads set and always start with grit 50 polishing pad by attaching it to the Velcro backing pad, unless the surface is already smooth and even. For wet polishing, slowly open water flow or use a sprayer to wet the surface. Start the polisher at low RPM (~1500-2500 RPM) and start polishing the material edge with side-to-side motion, not more than four or five times. With lower grits (50, 100, 200), too many iterations can grind more than needed without adding any value to the polishing finish.
4. After repeating the process with all the small sizes grits, you will find a better and smooth surface that is free from all saw marks or old sealant. Use the grinder initially at low speed (1500-2500 RPM) and then increase its speed slowly for faster polishing suitable for specific stone.



5. Before moving to the higher grit make sure every single part of surface was polished with each of the lower grits. Any unpolished area with lower grit will result in sub-optimal shine. A good way to ensure every single part of edge is polished is to wipe the edge surface with gently squeezed wet cleaning towel and then polish dry. The heat will evaporate the water where it is already polished. Make sure the entire water evaporates and then perform one more round of wet polishing. Move to the very next higher grit once the entire surface is polished. With higher grits (800, 1500), increase the RPM to 3000-3500 to avoid burning your stone's surface.
6. Repeat the processes with diamond polishing pads set from lower grits to the higher grit until you get the desired finish. Make sure to use all the grits from lower to higher. Apply gradually all the grits 50, 100, 200, 400, 800 and 1500.
7. Use one by one the pads until the surface starts to shine accurately. Then vacuum the area to remove any debris. You will find good shine starting with grit 800, and the grit 1500 will bring a mirror like finish.



8. Seal the surface using specific sealer for your stone.

## 4. Techniques for Polishing Engineered Stone

### 4.1 Know Your Materials

It's recommended to do some research before troubleshooting issues around polishing engineered stones. Different stone materials have slight differences that establish which products are easier to polish and which ones can generate trouble in the field. Here are some factors to consider that would speed-up the learning curve:

A. In general, the lighter coloured materials are easier to polish except for “absolute white” which is the exception from the rule. Lighter colours will present a very reduced content of quartz rock aggregate and high resin content. This characteristic makes the pad to be in contact more with the material's resin than with the quartz aggregate. Hence, the high resin composition leads to a greater probability of burning if the proper polishing technique is not applied. Some of the dark colour materials e.g. absolute dark or dark maroon have similar composition.

B. To persist in getting the best results, all the engineered stones varieties are treated as the most challenging types, the main goal being to match the factory finish of the stone.

## 4.2 Choosing the right Pads for your project

If you think this step is not important, you better think again. We noticed during the time many customers who think all pads are the same and they are exactly the customers that have trouble during the polishing process. There are colored pads on the market that can reach good quality polish, but often they require more time, lots of water and sometimes they even transfer the pads color onto the stone by the end of the process. Our recommendation is to use white resin pads.





## 4.3 Valuable Techniques

Here are some of the most useful hints that we recommend to improve the quality of your polish.

### 4.3.1 Use a rigid Backer Pad

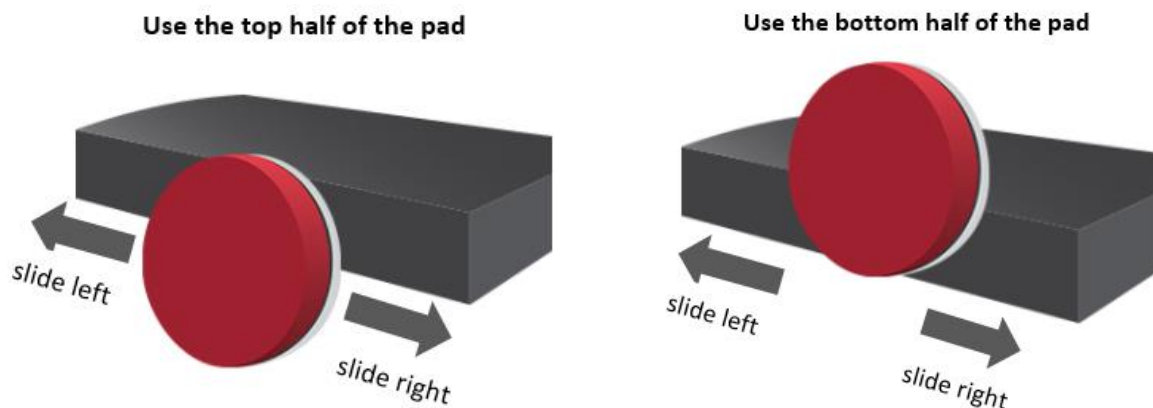
Think about the automated profiling machines which all use rigid tools and backers and in the same time they generate way better results than most fabricators could achieve by hand. If the flexible backers were the key, be sure you'd see them used on all auto-edge machines. Although flexible backers work well for concave profile edges such as ogees, the truth is the need to use them on almost any other profile is rare, plus the job can be done with a rigid backer as well with patience.



### 4.3.2 Stop using the Middle of the Pad

Here are two of the most common problems that emerge from using the middle portion of the pad:

1. When using abundant amount of water while applying pressure to the pad's middle portion, water will get trapped between the pad and the stone, causing a hydroplaning effect. As a result, the pad won't touch the material's surface properly and certain spots will not be polished.
2. Users who use minimum amount of water will notice the pads flexing and cupping outward around the middle. This way, only the edges of the pad will touch the stone leaving dull spots in the middle. Applying more pressure can fix this issue, but due to the flexible nature of the pad and the thickness of hook and loop used to secure it on the backer, these blurry spots might remain. To overcome this issue, use the pad's edges as you alternate from the top ½ to the bottom ½ while you slide across the stone edge. You should feel the pad's contact that will allow you to release some of the pressure.



Alternate from the top ½ to bottom ½



### 4.3.3 Use of Polisher RPM

Always take into consideration the polisher RPM. Too high RPM will create excessive heat that will result in white resin pads smearing on the stone. In other cases, it will even burn the stone itself. As a rule, for 50-100-200-400 grit pads use 2000-2500 RPM and with 800-1500 grit pads use 3000-3500 RPM. If you want to compensate for the loss of RPM, you can always add an extra pass. Never use above 5000 RPM.

### 4.3.4 Use of Water

Low grit pads, 50-100-200, can be used for dry polishing or with small amount of water. If you don't feel the lower grit pad biting the material, chances are you are using too much water and probably too high RPM. Starting with grit 400 and higher, it is recommended to use more water. Using a suitable amount of water can make the pads work faster which is in your advantage.

## 5. Expert Tips on How to Polish

Our product satisfies the needs of highly skilled professionals as well as amateurs in the polishing process. However, if you are totally new in this area, please have a look on the following tips that will help you understand and apply better the knowledge in your project.

### Engineered Stone Polishing with Confidence: 8 Tips

1. **Grind wet.** Always grind wet if you want to protect your lungs from breathing in the dust from stone polishing. On top of this, wet grinding eliminates the damage to stone-polishing pads.
2. **Judge dry.** Our recommendation is that you always dry the stone completely before judging the stone surface. If the surface is wet, scratches can pass unnoticed.
3. **Use the whole wheel.** Stop using only the middle of the pad. This will ensure a longer life for the product and better performances for your diamond pads.
4. **Skip no grit.** Work progressively from the lower grits to the higher ones. Don't be tempted to take shortcuts to save time. The goal is to have the scratches become finer with each grit size until they can no longer be seen. If you skip a grit and find deep scratches, you'll have to go back three or four grits to remove them. It's always faster to do it right the first time than to try to take shortcuts and risk damaging the stone you're working on.
5. **Polish slow.** Keep the speed of the pad low for the lower grits #50 #100 #200 (~2000-2500 RPM) and go to higher speeds for higher grits #800 #1500 (~3000-3500). Never use the pads at higher speeds than 5000 RPM.



6. **Keep it clean.** A good way to ensure every single part of edge is polished is to wipe the edge surface with gently squeezed wet cleaning towel and then polish dry. After the surface starts to shine accurately, vacuum the area to remove any debris.
7. **Believe what you see.** Your eyes are your most important tools when it comes to polishing. They are your feedback loop. If your eyes tell you that something is not quite right about the surface, believe them. Stop! Figure out what the problem is before continuing, and think through the steps you'll take to remedy it before you begin.
8. **Be patient.** Polish a little and look a lot. This is the mantra for successful results in the polishing process.

