HOW TO REPAIR AN ETCH

Customer guide

WHAT IS AN ETCH?

Acid etching happens when acidic substances come into contact with a concrete surface. Etching is the result of a chemical reaction between an acidic substance and certain compounds (calcium carbonate) in the cement. The acid dissolves the calcium carbonate upon contact, leaving a rough, dull, light-coloured patch on the surface. (Similar reactions occur with marble and some granites.) An etch is different than a stain; it is a physical alteration of the surface. The faster you clean up the acid on your concrete surface, the less time it will have to react and the less severe the etch will be. In most cases, visible etching will begin within a minute or two of exposure. Common acids in the kitchen include vinegar and vinegar-based sauces, ketchup, lemon juice, hot sauce and wine. **If the mark on your counter is lighter than the rest of the surface, it is an etch.** If you're unsure, rub your fingers over it: an etch will be duller than the polished surface and may feel a bit rough to the touch, although if your counters are well sealed, the etch should be fairly superficial.

If the mark on your counter is lighter than the surface itself, it is an acid etch.

HOW TO REPAIR AN ETCH

- The penetrating sealer on your countertops – and the overall density of our slabs - will help keep the etch close to the surface, making it easier to repair. Note that your concrete will continue to cure after installation, becoming harder with time. Etches that happen early on after installation may go deeper than those that occur later on, so try to be extra careful with your countertops for the first six months or so.
- Etch repair involves grinding away the etched layer of concrete and repolishing the newly exposed surface. For small spot repairs, this can be done with a set of handheld **diamond polishing pads**.
- The **lower grits (100-400)** serve primarily to remove the (usually very thin) layer of etched concrete. The **higher grits (800-3000)** are used to repolish the surface once the etch has been removed. (Your set will

likely contain a 50- or 60-grit pad, but you shouldn't need to use it.)
- Depending on the size of the area you are repairing, and how well practiced you are, a full etch repair may take 20-60 minutes.

To note:
- The repair process described in this document (using diamond hand pads) is primarily intended for **small spot repairs**. If you have a major etch, or a large number of etches, to repair, please contact D.A.S. for advice before proceeding. It may make sense for us to come and repair the etches for a fee (it is easier for us to repair an etch than to repair an unsuccessful repair job).
- If you have multiple etches to repair, we recommend repairing one at a time from start to finish.
- **Concrete gets darker as it is polished.** If you find that your repaired area is lighter than the original surface, you need to spend more time repolishing with the 800 – 1500 – 3000 grit pads. Don't rush this stage! It may be difficult to get a perfect match with the original surface, but minor variations should even out over time and with use as the overall surface patinas.

1. GATHER YOUR MATERIALS

You will need:
- Hand polishing pads (100-3000 grits)
    - Note that different brands of hand pads may offer slightly different grits. Don't worry if the numbers on your pads are different than cited here. Just work from the lowest number (coarsest grit) to the highest number (finest grit).
    - Most sets come with a 50- or 60-grit pad, but it is very coarse and will take off more concrete than necessary, so set it aside and don't use it. You may not need the 100-grit either, unless your etch is very deep.
- Spray bottle filled with water
- Dry, lint-free rags or paper towel
- Penetrating sealer (**Stonetech Bulletproof**), **Stonetech Revitalizer** and/or beeswax paste to refinish

TO REPAIR THE ETCH:

Spray bottle with water; paper towel or lint-free rags

handheld diamond polishing pads (50-3000 grits)

TO RESEAL THE REPAIRED SURFACE:

Stonetech Bulletproof sealer

Stontech Revitalizer (cleaner & sealer reinforcement)

2. PREPARE YOUR SURFACE

- **Mark off the area to be repaired.** It can be helpful to use rags to mark off the area you will be working on. Make the area a bit bigger than the area that is affected by the etch mark(s). You will need to **start small** with the rougher grits, focused on the area where the etch marks are, and gradually expand the area that you are polishing as you climb into the higher grits. This will help ensure that the newly polished surface blends nicely into the existing surface around it. The line of rags can help you gauge how far to expand your polishing areas as you climb into the higher grits.

- **Line up and check your pads.** For greater efficiency, organize your pads in the order that you will be using them, from lowest grit (lowest number) to highest grit (highest number).

    - **IMPORTANT**: Before you start working with your pads, check them for debris or manufacturing defects that could cause scratching. Run your fingers over the bottom of the pads and feel for any small bumps. Remove any loose debris (even the tiniest granule can cause scratching) by washing or wiping the surface. If you find defects – i.e. bumps – in the diamond surface, you can remove them by rubbing the surface of the affected pad(s) against the surface of the coarsest grit pad until any bumps have been removed.

- **Clean the surface.** Wipe down the surface well with water or a pH neutral cleaner to remove any debris that might get stuck under the polishing pads and cause scratches.

3. REPAIR THE ETCHED SURFACE

- Start by **spraying the area** to be repaired with water until the surface is completely wet (but not puddling).

- Starting with the **coarsest grit (lowest number)** pad that you will be using (we recommend 200 grit), and keeping your activity focused on the etched area, buff the surface vigorously, using small **overlapping** circles. Don't go too wide at this point or you will create more work for yourself later.

    - Note: The rougher the grit you start with, the more work it will be to repolish the affected area to match the existing surface. **We recommend that you start with the 200-grit pad**. If you find that it's not coarse enough to remove the etched surface (if the etch is deep or your concrete is very hard), you can drop down to 100 grits, but don't go lower than that or you will end up taking off too much of the concrete surface, making it much harder to repolish.

- For best results, work across the etched area systematically to ensure an even finish.

- If your hand gets tired, try switching up the direction of your circles or using a serpentine pattern. **Just make sure that you are overlapping your movements.**

- The more pressure you put on the pad, the more quickly you will remove the etch, but only use as much pressure as you can maintain evenly throughout the treatment. In the end, keeping an **even pressure** on the pad is more important if you want an even finish.

    - If you're unsure whether your pressure is even, check the bottom of your pads. If you are using an even pressure, the wear on the bottom of the pad should be even as well.

- Spray on more water periodically as the surface dries out. It is normal for the water on the surface to become dirty and bubbly. If the water becomes very murky, wipe it off and spray on clean water to avoid scratching.

- Once you have gone over the affected area several times with the coarse grit pad, you can move to the next grit (e.g. 400, if you started at 200). You don't want to spend too much time on the coarse grits, as you will make repolishing harder, but you should not move beyond 400 grits until you can no longer see the etch.

    - At 400 grits, the area you are working on will be lighter and rougher than the surrounding polished surface, but the repaired area should look and feel uniform (no more visible etch mark).

- Use a dry rag to clean off the water from time to time (e.g., between grits) to inspect your progress and ensure that there is no debris that could cause scratches.

- Repeat the process for each successive grit, all the way to 3000. With each grit, expand the area that

you are working on slightly. This will help blend in the appearance of the new and old surfaces.

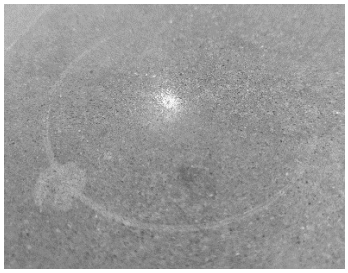
    - If you set out rags at the beginning as a marker, work your way out toward this line as you advance toward the final polish (3000 grit). You may need to remove the rags near the end to be able to work freely. Don't forget to **overlap your circles** or other patterns as you polish!

- Remember that from 800 grits up, you are repolishing the surface. This is where you will make the surface darker again to match the surrounding countertop. It is especially important to keep an **even pressure** on the pads when using the higher grits if you want to achieve an even finish. **Take your time repolishing!**

    - **If you get to 3000 grits and the repaired area looks significantly lighter than the surrounding countertop, you need to polish more.** Go back to 800 grits and spend more time on each grit. Polishing is as much about feeling as it is seeing, and it may take a few tries to get the hang of it. With the higher grits, as you start working with a new pad, try to feel (or hear) the difference as you move from the repaired area to the polished surface, and move on to the next grit when you no longer feel the transition.

- Occasionally the polishing pads may leave scratches on the surface if they are dirty underneath or if you are not using even pressure. If you notice surface scratches during the final stages of polishing (they tend to show up with the 800 grit), you can return to a lower grit (try 400 to start) to remove the scratches and work back up. Minor scratches will not affect the performance of your surface, so you can leave them there if you prefer.

- You can climb back down the grits (toward a coarser grit) if necessary to remove a persistent etch mark. Just be sure to climb back up the grits step by step again to obtain the best end result.



BEFORE

AFTER

4. RESEALING THE SURFACE

- We recommend that you **reseal** the repaired surface once the etch repair is complete, especially if your etch was deep, as the acids that caused the etch may also have broken down the penetrating sealer that protects your surface from staining and water penetration—or you may have removed

the layer of concrete where the sealer was housed. How you do so will depend on how your surface was originally sealed.

- The majority of D.A.S. concrete surfaces are sealed with **Stonetech Bulletproof** penetrating sealer. We recommend that you two fresh coats of sealer to the affected area once the surface is completely dry, as per the instructions on the bottle. Stop after the first coat if you see little or no absorption. Small bottles (pints) of Bulletproof sealer can be purchased from D.A.S. Concrete Countertops for repair and maintenance purposes.

  - Watch these videos for help in resealing your counters using **Stonetech Bulletproof:**
    - **How to properly apply penetrating sealers**
    - **How to seal countertops with Stonetech Bulletproof Sealer**

- If you have chosen to maintain a **beeswax paste** coating on your surface for extraprotection, you should also apply a fresh coat of wax to the affected area (after applying the penetrating sealer). This will help restore the surface to match the original finish.
- If you choose not to reseal the affected area right away, and are using **StonetechRevitalizer** (cleaner and sealer reinforcement) as part of your daily maintenance routine, we recommend, at a minimum, that you treat the repaired surface with several applications of Revitalizer. Please note that Revitalizer will help reinforce the existing sealer, but will not restore protection to the same extent as a new sealer treatment.

Video guide: Need more guidance? Check out our 'how to' video series on the D.A.S. Youtube channel: https://www.youtube.com/channel/UCbzyQE16Ich4D18ZRKRZv0g.

Still have questions? Please don't hesitate to contact us for help!