

NATURAL STONE CARE & MAINTENANCE GUIDE

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Caring For Your Natural Stone

Natural stone is one of the most time-tested and enduring materials available, delivering unique and elevated elegance to any space. The following suggestions are best practices for the cleaning, sealing, and maintenance to ensure that your natural stone looks and performs at its best for a lifetime.



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Evaluate Your Stone's Current Condition

Before approaching any type of care or maintenance, it is important to carefully assess the current condition of your stone. Here are a few basic questions to ask yourself when trying to estimate the state of your natural stone tiles:

What type of finish does your stone have?

The most common types of finish for natural stone are **honed** and **polished**. You can also have a cleft, flamed, sandblasted, leather, textured, or split face finish. If you notice that the original finish of your stone has changed over time, it may be necessary to restore your floor before sealing and use.



Polished Finish

This popular finish has a highly reflective surface that saturates the color of your stone and brings out more of the veining and variation. This finish makes it easy to clean, but can also be susceptible to scratching, etching, and wear patterns over time.



Honed Finish

A honed finish has a non-reflective, matte surface that may make your stone appear lighter and more flat in color and pattern. Honed finishes offer better slip resistance but may be more difficult to clean.

Are there any coatings such as wax, acrylic, etc. on the stone?

Natural stone is often sealed with different materials to avoid staining, etching, and other damage. If your stone has a coating, you will need to determine what it is to avoid cleaning it with the wrong material.

Are there any signs of worn sealing on the stone?

Once you determine which type of coating on your natural stone, you will also need to evaluate if it has damage and needs to be removed and replaced. A simple water drop test is often used by placing about a tablespoon of water on your stone for 15 minutes. If the water is absorbed or your stone becomes darker, then resealing is required. It is recommended that you perform sealing tests in heavy traffic and high-use areas to confirm uniformity throughout your floor or wall.

Are there any sign of cracking?

Cracks and fissures are a common occurrence in natural stone, and are often a part of its individual nature and beauty. Some stones are known for their larger pores, like travertine, and are sought after for certain applications. It is also common to receive stone that has cracks and fissures that have been filled to ensure an even surface.

If other cracks appear after installation, this could be a sign that the tile was not properly supported during installation, the stone had underlying structural issues, or the stone was put into an application where use or traffic was too extreme for that particular type. If the cracks are not extreme and do not cause any hazard, they can be filled and treated. If the cracks are more extreme, then the affected area should be replaced with proper application and installation techniques considered.

Is there any evidence of staining?

Staining is a common problem with natural stone. Different natural stones have different levels of porosity, or pores in the material that allow both air and water to infiltrate. If your stone isn't sealed or protected from these different elements, it is very easy for it to show the effects of contact with different substances. Refer to the Identifying & Removing Stains section of this guide for further information.

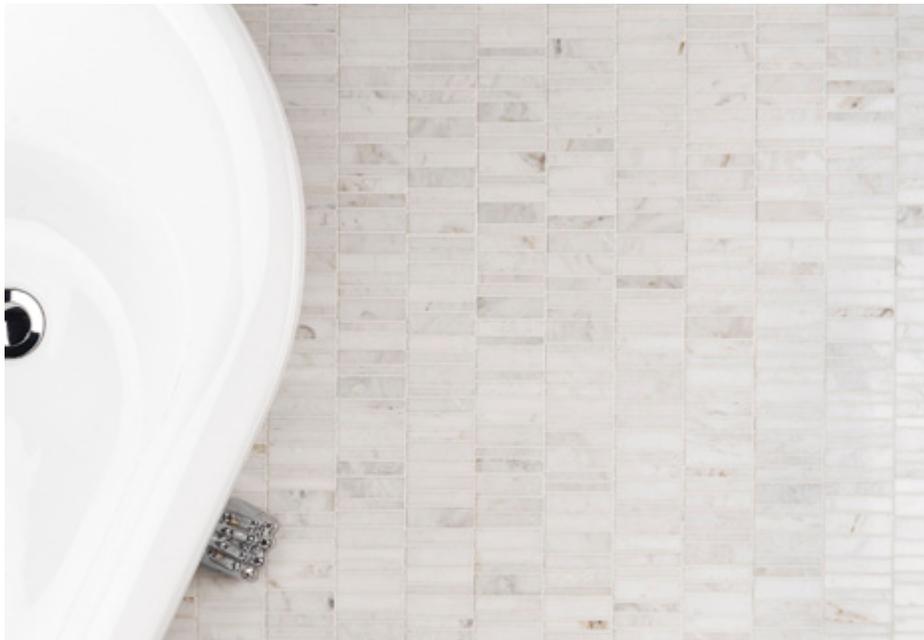
Sealing

Sealing is highly recommended for all types of stones to provide maximum stain protection, including marble and granite. This is especially true for areas that have high traffic, such as floors and countertops.

The two main types of sealers available:

Topical Sealers - There are coatings designed to protect the surface of the stone against water, oil, and other contaminants. Most topical sealers do not penetrate the surface and are a mixture of wax, acrylic, and additional plastic compounds.

Impregnators - These are water or solvent-based solutions that penetrate below the surface of the stone and create a repellent barrier against water and oil substances. Impregnators are considered "breathable" products which means that they allow vapor transmission through the stone.



If you choose to seal your stone, there are several things that you should consider:

Make sure it's safe – For areas such as countertops or vanities, it is important to make sure that your sealer is 100% food-safe and non-toxic. Always perform a test in an inconspicuous area and consult with a professional or the sealer manufacturer to confirm if you are unsure.

You may have to reseal - Sealing may require renewal depending on the type of material as well as the traffic and use of the stone. Make sure to read your sealer's suggested guidelines, as well as check for signs of fatigue during use.

Stick to one product – Every sealing solution has different properties. If you do switch products, ensure that they are compatible with both your stone and your previous sealer.

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Cleaning

Natural stone and stone tiles should be routinely cleaned with the appropriate product for that stone type. Not sure what stone you have? Check out page 2 of this guide for reference.

After identifying the type of your stone and evaluating its current condition, here are routine guidelines for cleaning your natural stone:



Most natural stone and stone tiles can be cleaned with a concentrated **pH neutral cleaning solution** to avoid damage to the stone itself or its sealer. It is recommended to avoid both cleaning solutions and tools, like sponges, rags, and mops, that include color or dyes that could translate



Even with more durable stone, it is not recommended to use acid-based cleaners. Acid-based materials, including mild solutions such as vinegar or lemon and water, can etch and damage most natural stones.



After applying your pH neutral cleaner to the stone surface, allow it to sit for the recommended time. Use a sponge or soft bristle brush to agitate the cleaning solution on the stone and then use a clean sponge to remove the solution. Gently buff dry.



In any case of spillage, it is recommended to immediately blot the spill with a dry paper towel or rag. Avoid wiping the area to prevent the spilled material from spreading further across the stone surface.

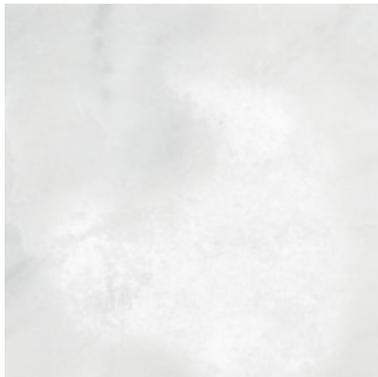


It is recommended to dust natural stone surfaces frequently to avoid debris scratching the surface. Mopping is also recommended to avoid permanent staining.

Identifying & Removing Stains

If you notice any staining on your natural stone, it is important to take immediate action to identify the type of stain and remove it accordingly to avoid permanent damage. The appearance and accumulation of stains are an indication that your stone may need sealing to protect from further damage.

The following are examples of common types of natural stone stains, along with guidelines for removal. Please note that these are best practices and your particular natural stone, sealer, and stain type may require further inspection and identification. If you are unsure about how to proceed, contact your local natural stone sales person or installer for consultation.



Acid-Based Stains

Common causes: Juice, Alcohol, Vinegar
Identified by: Etch marks in the surface of the stone, loss of polish
Method of removal: Dampen etched area with water and sprinkle with marble polishing powder. Rub with a damp cloth until mark disappears, keeping in mind that excessive rubbing could cause a change in finish. Deep etching may require refinishing.



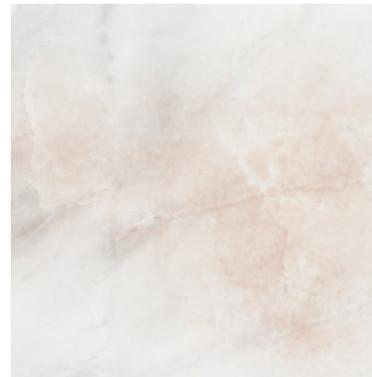
Oil-Based Stains

Common causes: Cooking Oil, Cosmetic Products, Grease
Identified by: Darkened spots on the surface of the stone
Method of removal: Clean the area with a soft liquid cleanser mixed with several drops of household detergent, ammonia, or acetone. If this doesn't work, apply a poultice (see page 7) and leave it for 24 to 48 hours. Rinse with warm water, dry the surface, and repeat if necessary.



Ink or Paint Stains

Common causes: Wall Paint, Magic Markers, Pen, Ink
Identified by: Dark or colorful marks and lines on the surface of the stone
Method of removal: For lighter stones, you may use bleach or hydrogen peroxide. For darker stones, it is recommended to use lacquer thinner or acetone.



Organic Stains

Common causes: Coffee, Tea, Fruit, Bird Droppings, Leaves, Food, Tobacco
Identified by: Pinkish-brown stains under the source of the stain
Method of removal: Mix a solution of 12% hydrogen peroxide and a few drops of ammonia. It is important to note that for outdoor spaces, usually sun and rain are enough to naturally bleach out the stain.



Metallic Stains

Common causes: Rust, Iron, Copper, Bronze, Brass
Identified by: Orange or brown rust stains, or green and muddy brown stains in the case of copper, bronze, or brass
Method of removal: Use a poultice (see page 7) to remove stain. Tough stains may require professional help.

Identifying & Removing Stains (cont.)



Biological Stains

Common causes: Mildew, Mold, Algae, Fungi, Moss

Identified by: Red, green, yellow, or brownish purple residue

Method of removal: Dilute 1/2 cup of ammonia OR bleach OR hydrogen in a gallon of water. Apply to stain and rinse clean. WARNING: DO NOT MIX BLEACH AND



Fire and Smoke Damage

Common causes: Smoke or Fire caused by Stove Tops, Grills, Candle.

Identified by: Black or dark brown marks on the surface of the stone

Method of Removal: Apply smoke removal products. Note: Fire and smoke-stained stone will often require thorough professional cleaning to ensure no further damage is caused.



Water Stains

Common causes: Water

Identified by: Dark areas around water sources

Method of removal: Allow the area to completely dry and the water to evaporate from the stone (which could take many days). Properly seal the stone to ensure protection against future water stains.



Making & Using a Poultice

A poultice is a liquid cleaner or chemical mixed together with a light absorbant material to form a paste that is then directly applied to a stain. Poultices are typically used to clean deep-seated or stubborn stains that cannot be removed with other cleaning methods.

How to Make Poultice?

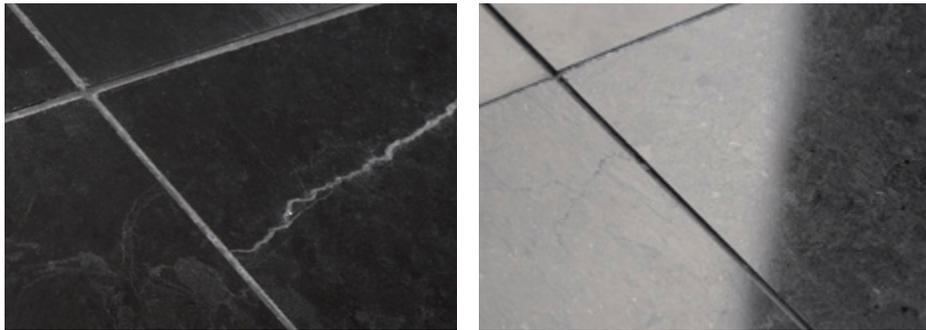
Poultice materials include kaolin, fuller's earth, whiting, diatomaceous earth, powdered chalk, white molding plaster, or talc. A poultice can also be prepared using white cotton balls, whitepaper towels or gauze pads. If using powder, mix the cleaning agent or chemical to a thick paste about the consistency of peanut butter. If using paper or gauze, soak in the solution and allow to drain until just damp, not allowing the liquid to drip.

How to Apply Poultice?

Spread the poultice over the stained area to a thickness of about 1/4 to 1/2 inch with a wood or plastic spatula. Cover the poultice with plastic (it is recommended to tape the edges of the plastic to the surface) and leave for 24 to 48 hours. If the stain is not removed, repeat the process. It may take five or more applications or difficult stains.

Damage Repair

Despite their durability and longevity, natural stone surfaces occasionally experience issues that may affect its look and performance. While proper care and maintenance of your stone could and should prevent these issues, some damage may still occur. The following section will outline common damages, how to identify, and steps to consider for repair.



Loss of Shine

Over time, the polished finish on stone surfaces may wear down due to traffic and use. This loss of shine could appear as areas with tiny etching marks or a general lackluster of the surface itself. Marble and other softer stones are especially susceptible to this type of wear.

Areas such as floors with higher traffic patterns and kitchen countertops commonly experience wear on their polished surfaces. The following measures can help to prevent expedited damage to these areas:

- Dust and mop/wipe down the surface often
- Place protective mats at entrances
- Perform work, like cutting, on proper surfaces instead of directly on the stone

If the polished surface of your stone is worn, it will most likely need to be refinished and resealed to restore it to its original luster. While it is possible to restore just the worn area, it could result in a noticeable difference of sheen. It may be best to plan to restore the entire area that is visible to the worn locations.

Moisture Damage

Moisture damage can occur when... water coming up through floor tiles, seeking a pathway to evaporate. Often, the veining or natural micro cracks in the structure of the stone provide this pathway. The moisture can carry salts to the surface that remain when the water evaporates, leaving behind what looks like a dried white powder. This is called Efflorescence.

If the water remains trapped within the stone or even on the surface, it can cause expansion and contraction. This can result in pitting and flaking on or within the tile. With enough water damage, the structure of the tile could be compromised and cause major cracking and breaking issues.



How to Clean Efflorescence Staining

If you identify white powdery stains that could be the signs of efflorescence on your stone ...surface, do not use water to clean or remove. This will only add to the problem. Instead, use a nylon scraper to remove any hardened powder and vacuum or mop up the remaining debris. This can be repeated as necessary, but if the problem persists, you may need to consult a professional tile and stone contractor to check for moisture issues with your installation.

Flaking or Pitting Due to Water Damage

In some cases, exposure to large amounts of water can cause flaking, pitting, or spalling on the surface of the stone. That process happens when instead of the salts depositing on the surface, causing efflorescence, they deposit below the surface, causing pressure within the stone itself. Once stone begins to spall, it is almost impossible to repair and will need to be replaced. It is also recommended to consult with your tile and stone professional to ensure that your installation is free of moisture issues.

Damage Repair (cont.)

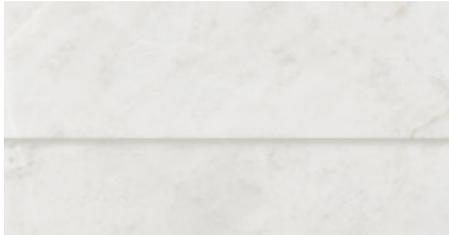


Yellowing

In some cases, the surface of the stone can turn yellow over time. Most commonly this is caused by embedded dirt and grime on the surface, or alternatively, the wearing of a wax or acrylic coating that was applied on the stone. Certain stones, and most commonly white marbles, naturally yellow with age due to iron oxidation.

How to Repair Yellowing

If the yellowing was caused by dirt or wax build up, it can usually be cleaned with an alkaline cleaner or a wax stripper. If at-home or professional cleaning doesn't work, this might be a natural yellowing of the stone itself, which means it is permanent.



Uneven Tile - Lippage

Lippage is a term that describes a condition where one edge of a stone tile is higher than the adjacent edges, creating an uneven surface. In most cases, lippage is the result of poor installation. Industry standards dictate that if the lippage is higher than the thickness of a dime or credit card (above 1/32-inch) it is considered excessive and should be repaired.

How to Repair Lippage

To repair lippage, the stone tile needs to be ground down to a flat surface, then honed and polished to the matching finish. This process



Cracks & Fissures

Cracks and fissures are very common in natural stone and are often seen as part of their inherent beauty. But cracks and fissures caused by external factors, such as faulty installation, settling and poor support, moisture issues, and acts of mother nature, can affect both the look and performance of your stone. If you do not see cracks or fissures during the inspection of your stone before installation, then you should not see it after installation either. If they do appear, it is best to confirm with a stone or tile installation professional that there isn't a larger problem with moisture or structure.

How to Repair Cracks & Fissures

If you notice smaller cracks or fissures, it is best to fill in with a color-matched polyester or epoxy filler. If the cracks are larger or pose a tripping or cutting hazard, it is best to replace that tile, ensuring that proper installation methods are followed to reduce the potential for future damage.

Before you repair the crack, it is wise to identify the cause of the damage to prevent further cracking. In most cases, it is recommended to advise professional stone and tile restoration experts.

