

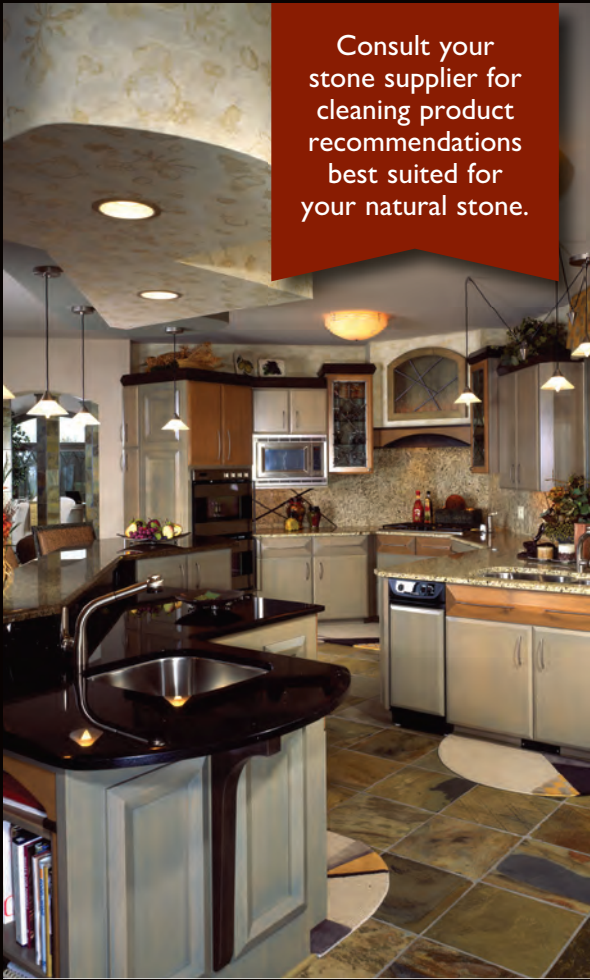


CARE
AND
CLEANING
of
NATURAL
STONE



M S International, Inc.
Premium Natural Stones™

www.msistone.com



Consult your stone supplier for cleaning product recommendations best suited for your natural stone.

Benefits of Natural Stone

Beautiful
Durable
Proven Sanitary
Affordable
Sustainable
Natural
Unique
Long Life Cycle
Easy Care

Get to Know Your Stone

The first step in proper stone care and maintenance is to understand your stone's geological classification and composition. This information will help you to identify what cleaning products to use and how best to care for your natural stone.

Natural stone is categorized into three basic geological classifications by their respective formation processes: Sedimentary, Metamorphic and Igneous. Additionally, stones in each category can be either Calcareous or Siliceous.

Calcareous stone is composed mainly of calcium carbonate, a chemical compound commonly found in natural stone, shells and pearls. Calcium Carbonate is sensitive to acidic solutions so mild, non-acidic cleaners are recommended.

Siliceous stone, as the term implies, is one composed primarily of silicates, such as quartz, feldspar, mica, etc. As such, a siliceous stone is generally resistant to most acids found in kitchen settings, although acidic cleaners are still not recommended, as these stones may contain trace levels of minerals that are acid sensitive.

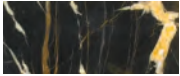
The following chart will be a helpful guide:

| | Sedimentary | Metamorphic | Igneous |
|------------|---------------------------------|---------------------------------|---------|
| Calcareous | Limestone Travertine Onyx | Marble Serpentine | |
| Siliceous | Sandstone | Slate Quartzite Soapstone | Granite |



Stone Colors and Appearance

Natural stone is quarried throughout the world in a variety of colors with varying mineral compositions. If you have stone in your home and do not know the type, you may want to consult with a stone professional. In most cases, the type of natural stone can be identified by visible particles at the surface of the stone. The following tips may be helpful:

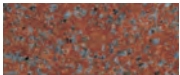


Marble



Onyx

Marbles are traditionally prized for their aesthetic appeal. Some are accentuated by pronounced veining trends and bold colors. Often included in the marble family are serpentine and onyxes.



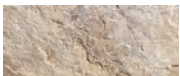
Granite

Granites typically exhibit small flecks or grains of minerals uniformly distributed throughout the stone. Some “exotic granites” will have veining patterns similar to marbles.



Sandstone

Sandstones vary widely in color due to different minerals and clays found in the stone. Sandstone is typically light gray to yellow or red. Bluestone and brownstone are well known varieties of this quartz-based stone group.



Limestone



Travertine

Limestone and travertines are widely used building stones with colors typically light gray, tan or buff. A distinguishing characteristic of many limestones is the presence of fossils that are frequently visible in the stone surface.



Slate

Slate is dark green, black, gray, dark red or multi-colored. It is most commonly used as a flooring material and for roof tiles and is often distinguished by its distinct cleft texture.



Soapstone

Soapstone may come in a wide range of colors and generally has a smooth feel to the touch.

Due to its high resistance to chemicals and because of its ability to absorb and distribute heat, it is an ideal material for countertops, fireplace and wood stove surrounds.

Each type of stone is unique and will vary in color, texture and marking.

Stone Finishes

There are several finishes (for example: polished, honed, leathered, antiqued, and others) available for natural stone and new finishes appear in the market regularly to keep pace with consumer demand. The type of finish will not impact the type of cleaning product used.

Easy Care Tips

To get the longest life and preserve the beauty of your natural stone, follow these simple tips:

Coasters: Use coasters under all glasses, particularly those containing alcohol or citrus juices.

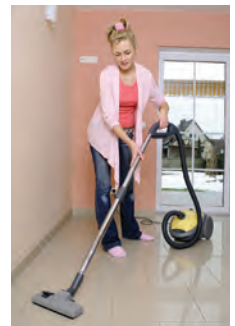
Trivets: While many stones can withstand heat, the use of trivets or mats is recommended.

Dust Mopping: Dust mop interior floors frequently using a clean non-treated dry dust mop. Sand, dirt and grit are abrasive and can damage natural stone.

Mats/rugs: Mats or area rugs inside and outside an entrance will help to minimize the sand, dirt and grit that may scratch the stone floor. Be sure that the underside of the mat or rug is a slip resistant surface.

Vacuum cleaners: If used, be sure the metal or plastic attachments or the wheels are not worn as they can scratch the surface of some stones.

Spills: Blot the spill with a paper towel immediately. Don't wipe the area, it will spread the spill. Flush the area with water and mild soap and rinse several times. Dry the area thoroughly with a soft cloth. Repeat as necessary.



Cleaning:

- Clean stone surfaces with a neutral cleaner, stone soap, or a mild liquid dishwashing detergent and warm water.
- Similar to any item cleaned in your home, an excessive concentration of cleaner or soap may leave a film and cause streaks. Follow manufacturer recommendations.
- Use a clean rag mop on floors and a soft cloth for other surfaces for best results.
- Rinse the surface thoroughly after washing with the soap solution and dry with a soft cloth.



- Change the rinse water frequently.
- In the bath or other wet areas, soap scum can be minimized by using a squeegee after each use. To remove soap scum, use a non-acidic soap scum remover or a solution of ammonia and water (about 1/2 cup ammonia to a gallon of water). Frequent or over-use of an ammonia solution may eventually dull the surface of some stone types.
- In outdoor pool, patio or hot tub areas, flush with clear water and use mild bleach solution to remove algae or moss.

Cleaning Products:

- Many suppliers offer products used for stone cleaning.
- Products containing lemon, vinegar or other acids may dull or etch calcareous stones.
- Scouring powders or creams often contain abrasives that may scratch certain stones.

- Many commercially available rust removers (laundry rust stain removers, toilet bowl cleaners) contain trace levels of hydrofluoric acid (HF). This acid attacks silicates in addition to other minerals. All stones, including granite and quartzite, will be attacked if exposed to HF.
- Do not mix ammonia and bleach. This combination creates a toxic and lethal gas.

Sealing

Sealing is a common step taken on some stones as an extra precaution against staining. In fact, the sealing products used in the stone industry are “impregnators” which do not actually seal the stone, but more correctly act as a repellent rather than a sealer. Sealing does not make the stone stain proof, rather it makes the stone more stain resistant.

When consulting with your stone supplier, you may find that many stones do not require sealing. However, applying an impregnating sealer is a common practice.

When considering sealing, remember that sealing the stone does not make the stone stain proof, it makes it more resistant to staining.

If a sealer is applied in a food preparation area, be sure that it is non-toxic and safe for use.

Consult with your supplier or sealing manufacturer specific to the type of sealer and frequency of use recommended.

Stain Identification Tips

Identifying the type of stain on the stone surface is the key to removing it. Stains can be oil based, organic, metallic, biological, ink based, paint based, acid based. If you don't know what caused the stain, consider likely staining agents that may have been present. Here are some questions you consider:

Where is the Stain Located?

- Is it near a plant, a food service area, an area where cosmetics are used?
- What color is it?
- What is the shape or pattern?
- What occurs in the area around the stain?

Stain Removal Steps

Surface stains can often be removed by cleaning with an appropriate cleaning product or household chemical.

What Type of Stain is It?

The following sections describe the types of stains you may have to deal with and the appropriate household chemicals to use and how to prepare and apply a poultice to remove the stain.

Oil-based

(grease, plumbers' putty, tar, cooking oil, milk, cosmetics)

An oil-based stain will darken the stone and normally must be chemically dissolved so the source of the stain can be flushed or rinsed away. Clean gently with a soft, liquid cleanser with one of the following: household detergent, mineral spirits, or acetone.



Organic

(coffee, tea, wine, fruit, tobacco, paper, food, urine, leaves, bark, bird droppings)

May cause a pinkish-brown stain and may disappear after the source of the stain has been removed.

Outdoors, with the sources removed, sun and rain action will generally bleach out the stains. Indoors, clean with 12% hydrogen peroxide (hair bleaching strength) and a few drops of ammonia.

Metal

(iron, rust, copper, bronze)

Iron or rust stains are orange to brown in color and follow the shape of the staining object such as nails, bolts, screws, cans, flower pots, metal furniture. Copper and bronze stains appear as green or muddy-brown and result from the action of moisture on nearby or embedded bronze, copper or brass items. Metal stains must be removed with a poultice. (See website on Using a Poultice – www.marble-institute.com/poultice) Deep-seated, rusty

stains are extremely difficult to remove and the stone may be permanently stained.

Biological

(algae, mildew, lichens, moss, fungi)

Clean with diluted cleaning solution. Use a 1/2 cup of any of the following: ammonia, bleach, or hydrogen peroxide and a gallon of water. Reminder: do not mix bleach and ammonia.

Ink

(magic marker, pen, ink)

On light colored stones, clean with bleach or hydrogen peroxide. On dark colored stones, clean with lacquer thinner or acetone.

Paint

Small amounts can be removed with lacquer thinner or scraped off carefully with a razor blade. Heavy paint coverage should be removed only with a commercial "heavy liquid" paint stripper available from hardware stores and paint centers. These strippers normally contain caustic soda or lye. Do not use acids or flame tools to strip paint from stone. Paint strippers can etch the surface of the stone; repolishing may be necessary. Follow the manufacturer's directions for use of these products, and flush the area thoroughly with clean water. Protect yourself with rubber gloves and eye protection, and work in a well-ventilated area. Use only wood or plastic scrapers for removing the sludge and curdled paint. Normally, latex and acrylic paints will not cause staining. Oil-based paints, linseed oil, putty, caulks and sealants may cause oily stains. Refer to the section on oil-based stains.

Water Spots and Rings

(surface accumulation of hard water)

Buff with dry 0000 steel wool.

Fire and Smoke Damage

Older stones and smoke or firestained fireplaces may require a thorough cleaning. When the smoke is removed, there may also be some etching (due to carbonic & other acids in smoke). Commercially available "smoke removers" may save time and effort.

Etch Marks

(caused by acids left on the surface of the stone)

Some materials will etch the finish but not leave a stain. Others will both etch and stain. Contact your stone dealer or call a professional stone restorer for refinishing or repolishing etched areas.

Efflorescence

(a white powder that may appear on the surface of the stone)

It is caused by the deposition of mineral salts carried by water from below the surface of the stone. When the water evaporates, it leaves the powdery substance. If the installation is new, dust mop or vacuum the powder.

You may have to do this several times as the stone dries out. Do not use water to remove the powder; it will only temporarily disappear. If the problem persists, contact your installer to help identify and remove the cause of the moisture.



Scratches and Nicks

Slight surface scratches may be buffed with dry 0000 steel wool. Deeper scratches and nicks in the surface of the stone should be repaired and repolished by a professional.

Using a Poultice

Go to www.marble-institute.com/poultice for more information, or call a stone professional (recommended).



Easy to Clean and Maintain!

Call your professional stone supplier, installer or a restoration specialist for problems that appear too difficult to handle.





Natural Stone

Easy Care Tips!

About the Marble Institute of America

Founded in 1944, the Marble Institute of America (MIA) is the leading resource for information and education for the natural stone industry. MIA members include marble, granite, limestone, sandstone, and other natural stone producers and quarriers, fabricators, installers, distributors, and contractors around the world.



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