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# GET TO KNOW YOUR STONE

The first step in proper stone care and maintenance is to understand your stone's geological classification and composition.

#### FIRST, A LITTLE GEOLOGY

Marble is a metamorphic rock 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.



Pearl Grey Georgia Marble

# STAIN AND SCRATCH PREVENTION

Natural stone is incredibly durable and stain and weather resistant, but even rocks aren't indestructible. A regular gentle cleaning prevents most damage and will preserve the beauty of your natural stone.

#### CLEANING

Clean stone surfaces with a ph neutral cleaner, stone soap, or a mild liquid dishwashing detergent (such as Dawn) 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 that are citrus based, contain 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.

#### **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.



#### **STEPS TO SEALING**

Sealing is a common step taken on some stones as an extra precaution against staining. In fact, the best sealing products used in the stone industry are "impregnators" as opposed to inferior "topical sealers," which form a film on the surface, wear down easily, discolor and alter the stone's appearance. Good quality impregnating sealers are designed to penetrate below the surface of the stone and act as a repellent that won't change the look or feel of the stone. 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 and allows more time to wipe up spills before it penetrates the surface.

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.

#### STAIN REMOVAL STEPS

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



## WHAT KIND OF STAIN IS IT?

STAIN TYPE	CULPRITS	WHAT IS IT?
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 percent 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. 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.*
		* 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 fire stained fireplaces may require a thorough cleaning. When the smoke is removed, there may also be some etching. Commercially available ''smoke removers'' may save time and effort.
Etch marks	caused by acids	Some materials will etch the finish but not leave a stain. Others will both etch and stain.**
Efflorescence	white powder on surface of 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	acrylic, latex	Slight surface scratches may be buffed with dry 0000 steel wool.** **Contact your stone dealer or call a professional stone restorer for refinishing or repolishing etched area or deep scratches or nicks.





#### FIND AN MIA+BSI MEMBER

MIA+BSI members abide by the MIA+BSI Code of Ethics and their stonework is done in accordance with the industry guidelines, the Dimension Stone Design Manual

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