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StoneFloors & StoneWalls

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Why All Stones are NOT THE SAME

To properly maintain the beauty and character of natural stone, you first need to understand how it was created.

Some stones are very hard and dense (eg. granite). Some are soft and stain easily. The common thread with all stone is a substance called silicon dioxide, or silica (silicon and oxygen). The amount of silica is the major factor which determines the porosity of a piece of stone (and subsequently its stain resistance).

Put simply: high silica = low porosity, good stain resistance, good chemical resistance (eg granite)
low silica = high porosity, poor stain resistance, low chemical resistance (eg limestone)

During the formation process of natural stone, the silica content is modified by various forces of nature, eg. heat, erosion, pressure and chemical interaction with other chemicals.

Limestone, Travertine and Sandstone are all examples of sedimentary rock, which is formed by pressure with little or no heat. They contain low levels of silicates and because their minerals are in their original state, these are the most reactive of all types of stone. Sedimentary stone is porous and will react easily with chemicals such as acid. It is therefore best located in low traffic areas and will need to be sealed and then maintained with a pH neutral, or slightly alkaline, cleaner.

Marble and Slate are metamorphic rocks – formed by pressure and heat. They contain relatively low levels of silicates and because they have been subject to heat, their minerals may have combined to form new compounds. They are more stable and less reactive than sedimentary but will still require some degree of maintenance. Marble is probably **not** best located on a kitchen bench top, where acids such as vinegar and lemon juice can etch the surface.

Granite and Basalt, both samples of igneous rock, have been subject to massive levels of heat and pressure during their formation. They contain high levels of silicates and are very stable and non-reactive. They can therefore tolerate extremely harsh treatment and can be located just about anywhere. However, basalt contains calcium and will react with acid, so it is not as universal in its use as granite.

CLEANING and SEALING

Cleaning and Caring for your StoneFloors and StoneWalls

Most natural stones are alkaline by nature. Therefore the best way to clean them is with pH neutral or alkaline cleaning products (*neutral for regular maintenance: stronger alkaline for periodic heavy duty cleaning*). Use a stiff brush to help the cleaner do its job and if possible, use a wet vacuum to remove heavy duty cleaners.

The main rule to remember is – **no acid** (that includes vinegar, lemon juice etc.)!

Why?

Opposites attract!

Here's an example – if an acid (such as vinegar) is poured onto a soft stone like limestone, it will react almost immediately with the (alkaline) minerals in the stone, resulting in the formation of new compounds, which often appear as a nasty residue on the surface of the stone.

To ensure easier maintenance, all stone should be sealed with a premium quality sealer after installation. Penetrating sealers help to prevent oil or water based staining, BUT – they don't prevent damage due to acid etching, so keep acids where they belong – in the cupboard !

Enhancing Natural Stone

Penetrating sealers are designed to sit below the surface of a stone tile or stone paver. They work by reducing porosity – thus helping to repel oil and water based stains. Typically, they produce no sheen and no visible change to the surface.

However, there are some that are designed specifically to penetrate and enhance the colour and character of the stone's surface. These sealers can rejuvenate the colour and improve the appearance of worn and weathered stone. New installations of polished bluestone and tumbled marble in particular, are improved dramatically when treated with an enhancing penetrating sealer.

It's actually the physics of light and not the chemical itself, that creates the enhanced appearance. Once treated, the stone's surface reflects a reduced amount of light and we see a darker colour. Just another example of nature and man working in tandem to produce great beauty.

Preventative maintenance

Once sealed, the only maintenance required is regular sweeping to clear any dust and dirt that would accumulate during normal wear.

During wet cleaning of the surface ensure that pH neutral substances are used.

The properties and general characteristics of many stones make it relatively easy to maintain. Outlined below are general cleaning methods, however the usage and density of traffic would determine cleaning schedules.

Stone is a natural product and hence regular cleaning is recommended.

Sweeping

The old fashioned broom is still a valuable part of everyday maintenance of any floor surface - stone included.

It is very important to remove soils from flooring surfaces before they get ground into the floor. Soils are abrasive. The more often soils are removed the longer the floor will retain the original appearance.

Use a broom with a bristle that matches your surface. A soft broom or brush is recommended for smooth surfaces. A medium-soft bristle is ideal for textured surfaces.

Vacuum

A good vacuum cleaner works better on textured surfaces than a broom and is very efficient. Use a vacuum on any horizontal surface when large areas are involved as it is faster than sweeping in most cases.

Damp Mopping

A damp mop is capable of picking up microscopic abrasive soils and potential staining agents. Damp mopping is recommended for most smooth surfaces on a regular basis. Best done after sweeping or vacuum.

Washing

It is necessary to wash a floor regularly. The job conditions will dictate frequency. The most frequent problems encountered with stone floors are related to the floor simply not getting effectively washed often enough.

Rinsing

Rinsing is one of the most critical steps in regular floor maintenance. Dirty mop water residue is common and a cause for much complaint. A two bucket rinse method is highly effective in keeping floors from graying out due to soil residues.

The following information in this section is for referral only. Whilst ordinary cleaning (sweeping, mopping and rinsing) can be performed by non skilled persons, we strongly recommend a professional stone cleaning company to perform cleaning and sealing which will require use of cleaning agents and sealants.