



Advancing the Industry of Surface Sustainability

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Designing a sustainable stone floor maintenance program

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Walk into any stone, terrazzo or janitorial chemical supplier and you will find an endless selection of cleaners, sealers, restorers, etc., to keep your terrazzo and stone floors looking new.

The problem is that many of these chemicals can be harmful to the user, occupants, and the environment.

How does one design a program that is not only sustainable and safe, but also keeps terrazzo and stone flooring in like-new condition?

The following guideline will show you how to develop a sustainable maintenance program.

Step 1

A good sustainable maintenance program starts with proper identification of the stone.

Is it granite, marble, terrazzo or limestone?

If it's marble, is it soft or hard?

What type of finish does it have?

Is the type of stone the proper material for the traffic it is to receive? If not, maintenance costs will be higher.

If the answers are unknown, contact a reputable stone supplier or restoration company.

A complete understanding of your particular stone's characteristics is an absolute must for designing a sustainable maintenance program.

Step 2

Once the stone's characteristics are identified, one can determine the quality of the installation.

Are the tiles flat and even?

Do they contain lippage (uneven tiles)? If so, proper maintenance may prove difficult.

The floor should be ground flat, then honed and polished using sustainable restoration procedures that utilize non-chemical methods.

Are there any cracked tiles?

Dirt has a tendency to accumulate in these cracks.

These tiles should be replaced, or if replacements are not available, at least repaired.

Step 3

What is the present condition of the stone?

Has it been coated with waxes, acrylics, urethane or other coatings?

If so, these coatings need to be ground off to determine the condition of the stone as well as eliminate any toxic and unsafe properties.

If a poor condition is found, complete restoration is necessary before a successful sustainable maintenance program can begin.

Step 4

Only after the stone is restored to like-new condition will a sustainable maintenance program provide good results.

This applies not only to the following, but to any program.

If the stone will be exposed to water, coffee, spills, etc., an application of an approved green impregnator is recommended.

These impregnators are designed to penetrate into the stone, without leaving coatings on the surface and still allowing the stone to transpire (breathe).

They contain no harmful vapors or off gases when cured.

Step 5

The three most important tasks that can be done on a daily basis to keep the stone's appearance new and extending the time before restoration is required are: **Dust mopping, dust mopping, and mopping with a duster.**

The most destructive materials to the majority of stones are miscellaneous gritty substances such as sand and dirt.

If these substances could be eliminated, maintenance of the stone would be almost non-existent.

A stone floor can never be dust mopped too often.

Use a clean, non-treated, dry dust mop at least two to three times a day in high traffic areas and less often in low traffic areas.

Walk-off mats placed outside and inside an entrance will eliminate a good portion of sand, dirt and grit.

It takes approximately seven steps to remove all loose dirt from the bottom of one's shoes.

Walk-off mats also need to be removed and cleaned daily.

Keep this in mind when purchasing walk-off mats.

Remember, if sand, dirt and grit are eliminated, there will be nothing left behind to scratch and dull the stone.

Moreover, coatings, in addition to potentially being hazardous, contribute to the accelerated wearing of the stone or terrazzo surface by acting as a magnet for dirt and debris.

It has been shown in studies that a stone or terrazzo floor without any coating will be easier to maintain and more cost effective.

Step 6

All natural stone, both polished and unpolished, should be cleaned daily in high traffic areas and less often in lower traffic areas.

A clean rayon or cotton string mop should be used with cold to warm water with the addition of a quality, green-certified neutral cleaner or stone soap.

Approved green neutral cleaners are defined as surfactant-type detergents that have a pH of seven. Acidic and alkaline cleaners should not be used.

Be sure to follow the directions carefully.

Why does stone shine?

All stone is taken from the earth in a raw block form.

This block is cut into slices that we call slabs.

The slabs are then cut further to a smaller size, such as tile or countertop.

It is then polished using a series of abrasive materials.

The mechanics are relatively simple.

A piece of stone is rubbed with a series of abrasives starting with a coarse grit size followed by finer grit sizes.

The scratch pattern left behind from one grit is removed by the next grit, creating finer scratches.

This process is continued until the scratch pattern becomes microscopic.

The process is similar to refinishing a piece of wood, starting with coarse sandpaper and ending with fine sandpaper.

The shine is placed on the stone by continuing this abrading process using very fine powders.

With sustainable (green) restoration methods, no chemicals are used.

Periodically, the stone will need to be restored.

However, how often this will need to be done is difficult to determine.

Generally, if all the precautions above are followed, restoration may only be needed as often as once per year or as little as once every five years.

The restoration process re-hones the stone to remove deep scratches and, in this process, is re-polished.

Do not attempt the re-honing process yourself; this requires a great degree of skill and experience. Call a reputable restoration company who specializes in sustainable methods for this task.

Natural stone care and maintenance is one of the oldest tasks performed by our ancestors and was done without any of today's modern chemical products.

The above guidelines were developed after years of experience with this beautiful material which, with the addition of sustainable practices, will continue to provide many years of beauty.