

**We have Italian marble on the lobby floors in our commercial office buildings. Recently, we have noticed several problems: 1. Entire tiles are evenly discoloring yellow or grey and 2) Rust-like stains are appearing in an area near the door. What**



The yellowing and graying of certain Italian and Greek white marbles is a common problem that I see all over the country. There are several possible causes for this condition:

**Maintenance technique-**Take a close look at your maintenance program. Are you using certain waxes or acrylics that may be causing this yellowing. There are several products on the market that are not designed for use on marble and may turn yellow over time.

If these coatings are causing the yellowing or graying a strong alkaline wax stripper will correct the problem. Be careful not to use an abrasive that may scratch the marble. There are several strippers on the market that will remove these coatings with very little agitation.

Also check the type of cleaner you are using. Make sure it is a neutral Ph cleaner and that it is designed for use on marble and stone. Make sure the mop that is being used is clean and rinsed frequently. A dirty mop and dirty mop water will also cause a white stone to take on a gray or yellow appearance very quickly. Graying of certain white marble is also common when certain polishing methods are used that require steel wool for buffing. If steel wool is being used make absolutely sure that the floor is dry. If the steel wool is being used while the floor contains any moisture it will most certainly gray and the steel wool will oxidize and yellow. Iron minerals. Certain white marbles over time will begin to yellow , turn gray or darken naturally. The cause for this

condition is usually the result of iron minerals in the marble itself. Some white marbles contain rather high concentrations of ferrous oxide(iron). When the stone is set these iron deposits do not appear until several months or sometimes several years after installation.

What is happening is the iron is slowly oxidizing, triggered by moisture from daily cleaning, the setting bed or just humid conditions. This is similar to a shiny piece of metal that when exposed to the air and water will rust.

Unfortunately once this condition exists it is very difficult if not impossible to correct. Several chemicals have been used successfully that may improve the condition. Mild acidic rust removers can work effectively to remove the yellowing. Be careful, these rust removers will etch the marble and re-honing and polishing will have to be done after treating with these products. Always test a small area first to determine if these chemicals will provide the desired results. Another chemical used effectively on iron staining is Sodium Hydro sulfite and Sodium Metabisulfite. These chemicals work well both in a poultice and alone as a remover. Please follow package directions carefully and always test first.

Yellowing can also be caused by iron containing minerals in the setting bed. If the initial setting used a mortar or water that was high in iron, it may be leaching through the marble and causing the staining. If the problem is severe enough I would suggest removing a tile and sending both the tile and a sample of the setting material to a testing lab for analysis. This test is inexpensive and could provide an answer to where the yellowing is coming from.

The rust staining near the entry door can be caused by any of the above but most likely is coming from any number of sources. Check to see if there is any metal near by, thresholds that are attached with metal screws, these screws may be rusting. If your building is located in a northern climate where de-icing compounds are used, this may be the cause. Some of these de-icers contain iron. Are walk-off mats being used. Walk-off mat can hold moisture under them and will cause rusting if this moisture contains any iron. Clean under these mats frequently.

I would recommend applying several test poultices to these stain areas to remove the rust. There are several available from your marble supplier. There are any number of causes and solutions for your marble to gray and yellow. Please take a careful look at the suggestions above. If an answer can not be found I suggest you contact a professional restoration company to evaluate the problem.

Online URL:

<https://sr-manual.com/kb/article/we-have-italian-marble-on-the-lobby-floors-in-our-commercial-office-buildings-recently-we-have-noticed-several-problems-1-entire-tiles-are-evenly-discoloring-yellow-or-grey-and-2-rust-like-stains-are-appearing-in-an-area-near-the-door-what-655.html>