

What's Under Your Carpeting?

By Frederick M. Hueston

If your building was built prior to 1980 chances are you are hiding one of the most beautiful, elegant and sustainable floor materials. That material is known as Terrazzo. Today, sustainability or what is more commonly known as Going Green is rapidly being required by many school systems, governments and private industry. Of all the materials that can be used for flooring there are only a few that qualify as sustainable and are considered safe. They are stone and terrazzo. However, even these materials can contribute to pollution and pose all kinds of health and safety risks if not properly cared for.

Why should you be concerned about your carpets and other flooring? The General Accounting Office of the EPA reports that one of the top five health concerns is Indoor Air Quality. In addition they report that nearly 50% of the US schools have this problem.

The following article will outline some of the hazards associated with other floor materials such as carpet and vinyl, as well as present a truly sustainable restoration and maintenance process for stone and terrazzo flooring. This information should help with your quest to improve indoor air quality in your school or building.

Carpet

Of the entire floor covering available carpet is the most popular and also the most hazardous. New and old carpets alike emit harmful VOC's (volatile organic compounds) into the air. A solvent such as toluene, benzene, formaldehyde, ethyl benzene, styrene, acetone and the list goes on and on. Carpets are also a great breeding ground for dust mites, fleas and other insects as well as toxic molds and mildew. In addition carpet cleaning chemicals have been linked to diseases such as Kawasaki's, fibromyologia and allergies.

Carpet in schools, offices and other public and private buildings are even more hazardous due to the number of people who not only walk on them but also people deposit skin cells, dust etc, not to mention food and drink that is spilled on them which provides the organic material necessary for bacteria to grow and thrive.

Of all the floor coverings carpet has the shortest service life.

Vinyl Composition Tile (VCT)

VCT is just as hazardous as carpet and possibly even more. The Adhesives used to attach VCT emit high levels of VOC's. Since VCT is tile moisture is often found between the tiles where toxic mold can grow. VCT is found in almost all schools, government buildings, etc. and is very inexpensive.

In addition to VCT composition almost all of it is maintained with harmful acrylic coatings. These coatings need to be removed (stripped) and the strippers used contain

hazardous chemicals as well (see article titled (Are Floor Strippers Safe). The Environmental Protection Agency (EPA) recommends that any major maintenance be performed only when the school is unoccupied for 48 hours.

Agglomerates

Agglomerated tile is composed of real stone fragments and polyester or epoxy resins. Some name brands include Fritz tile, Rover, Etc. The manufacturing process uses synthetic resins that emit high amounts of VOC's. Agglomerates are often maintained using the same hazardous coatings and strippers used on VCT

Terrazzo and Stone

Marble, Granite, limestone, slate and terrazzo are the only true sustainable floor coverings. Stone is all natural and contains no harmful VOC's or any other hazardous elements. They are manufactured by mother earth and there fabrication uses only water and abrasives. Terrazzo is composed of natural stone and Portland cement and is also very sustainable. In addition Natural Stone and Terrazzo flooring is long lasting. Just look at some of the buildings in Italy, France and other countries around the world. Some of these stone floors are hundreds of years old.

The dangers with stone and terrazzo floors come with the restoration and maintenance of these surfaces. Hazardous chemicals, polishes, sealers etc are often used for restoration and maintenance. These chemicals are as hazardous as the waxes and strippers used on VCT and agglomerated floor coverings.

The good news is that Stone and Terrazzo flooring can be restored and maintained with no harmful or hazardous chemicals. The restoration process uses only water and abrasives. Daily maintenance can be carried out using only Green Seal approved neutral cleaners.

If your floors are currently covered with carpet, vinyl etc. you may want to consider removing these harmful and dangerous floor coverings and restoring the terrazzo or stone that is under them.

Note: If you floors are not stone or terrazzo and are only concrete. Concrete can be polished and maintained as well.