

## Seamless Floors

### What are They, Why Have One, and How do you Maintain It?

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It is every facility owner's dream, and every maintenance department's nightmare, to have a glossy, reflective, spotless, skid resistant, and attractive floor. This is accomplished by sealing the existing floor with a coating system. Coating systems primarily reduce the penetration of dirt and grease into the floor. This protects the floor and increases the life of the building. At the same time, the flooring system can be designed to incorporate skid and chemical resistance, beauty, and ease of maintenance. These goals can be met through careful analysis and cooperation between the architect, owner, manager, and maintenance department.

There is an inverse correlation between the cost of a floor and the cost of maintaining it. An unprotected floor will require much more maintenance attention than one with even the simplest of coatings. However, with a properly specified and installed flooring system, maintenance costs can be further reduced and long term protection and wear can be achieved.



Epoxy terrazzo at Daphne Public Library, Daphne, AL

Four basic types of flooring systems include terrazzo, trowelled mortars, slurry/broadcasts, and coating systems. These floors can be generally maintained with a routine program similar to any good housekeeping procedures. Thorough sweeping and mopping to remove loose particles and soil along with prompt removal of grease and

other contaminants will prevent most seamless flooring systems from early deterioration. Seamless floors are easier to maintain than their counterparts in the resilient flooring industry because there are no cracks and crevices to entrap contaminants.

### Epoxy Terrazzo Floors

The cream of the crop in the flooring market is epoxy terrazzo. It is permanent, beautiful, and the least expensive to maintain for just pennies per square foot. Epoxy terrazzo floors are the twentieth century's answer to the beautiful terrazzo of the last two thousand years. Because of today's technology, terrazzo can be created with minimal weight, making it available for upper stories, and with the full spectrum of colored matrixes and intricate design capabilities. Terrazzo floors have the longest wearing life and lowest life cycle cost of any flooring system, and can be totally renewed merely by grinding and resealing the surface. They are commonly found in hospitals, operating theaters, schools, office complexes, pharmaceuticals, laboratories, churches, treatment plants, malls, stores, and airports.

### Trowelled Mortars

Trowelled mortar systems are the most resistant of seamless floors. With high impact and heat resistance, they are ideal in the roughest of conditions. Mortar systems can be both decorative and functional and often incorporate skid resistance. Trowelled mortars are the only systems that can withstand the thermal shock of steam cleaning. Chemical resistance and ultimate performance is dictated by the seal coat. Trowelled mortars are found in heavy manufacturing, waste water treatment facilities, commercial bakeries and food production areas, and heavy duty equipment facilities.

### Slurry/Broadcast Floors

Slurry/Broadcast floors have developed into a large market. These floors provide general purpose

protection from foot and wheel traffic and chemical attack. Like mortar systems, broadcast floors can be both decorative and functional. Skid and chemical resistance are dictated by the final coats. Slurry/broadcast floors are becoming increasingly more common, especially in laboratories, hospitals, showrooms, food processing areas, common areas, mechanical equipment rooms, warehouses, and shower rooms. A popular type of broadcast floor is one imbedded with colored quartz granules. Quartz floors combine a highly decorative appearance and excellent skid and chemical resistance. They provide a bridge between the pricey terrazzo floors and a solid coating.



Broadcast epoxy quartz in airport baggage claim area

## Coating Systems

There is a wide array of coating systems. These systems provide the most basic level floor protection and should be limited to areas of light to moderate traffic. The typical coating system contains a prime coat, body coat and finish coat. The extent of wear and chemical resistance of coating systems is dependent on the materials used. A good rule of thumb would be that the thicker the system, the more abuse it can handle. Typical uses are in plant areas with moderate wheel traffic, mechanical equipment rooms, car repair facilities, animal facilities, and cafeterias.

## General Cleaning Information

There are many ways to seal raw concrete and keep dust and deterioration at bay. No matter what flooring system is recommended or installed, a routine maintenance program is the best way to protect your investment and lengthen the life of the floor. An outline of daily and weekly maintenance can help to organize your program.



High build coating in light manufacturing area

## Daily Maintenance

- **DAILY SWEEP SEAMLESS FLOORS.** Routine sweeping, then mopping with common household detergents or soaps, followed by thorough rinsing prevents damage to the finish from the grinding effect of minute abrasive particles common to work areas.
- Treated mops may be used to remove abrasive particles.
- Promptly remove grease and other contaminants.
- Promptly **RINSE OFF** all chemical solutions that may attack the surface.

## Weekly Maintenance

All seamless floors should be mopped on a regular basis with a neutral detergent or soap, and thoroughly rinsed. Water should be changed frequently and mops rinsed often. **SMOOTH FLOORS** are readily cleaned in this manner unless they are subject to heavy traffic and steel or hard rubber wheels that can leave marks that require extra attention. In addition, non-skid surfaces can be resistant to ordinary mopping. Severe spillage or routine major contamination also requires special cleaning protocols. Special procedures for **TEXTURED FLOORS** and **PROBLEM AREAS** may also be applied in these instances.

**TEXTURED FLOORS** may require the use of a mechanical scrubber or a firm bristle brush to reach the base of the texture. Severe **PROBLEM AREAS** may be treated as follows:

- **GREASE:** Greasy deposits are best attacked with Tri-sodium phosphate or a commonly available biodegradable cleaner. Contact your flooring product manufacturer for specifics.

- **DAIRY PRODUCTS** should be removed immediately as they may cause staining to some surfaces.
- **TIRE MARKS:** Scrub thoroughly with a stiff bristle brush using the same biodegradable cleaner as mentioned above.
- When attacking **STUBBORN DIRT OR STAINS**, allow the cleanser to work for you by allowing it to stand an extra moment or so on the problem area before thoroughly rinsing with clean water.
- It is imperative that strong chemicals be rinsed from the surface of any floor as soon as possible.

### Waxing & Polishing

Seamless floors need not be waxed or polished. However, should wear areas appear in heavy traffic areas, waxing or polishing the floor with a standard commercial product may enhance the appearance.



Worn, trowelled epoxy mortar in commercial bakery

### Renewing & Refinishing

Most urethane and epoxy seamless floors are designed to withstand heavy wear and tear. However, should visible wear occur in high traffic areas, you may wish to restore the floor by resealing it. Before applying any permanent material to the floor:

- Remove all wax and other contaminants. A light sanding of the surface is recommended.
- Consult your installation contractor to determine the appropriate sealer that will be compatible with the existing floor.
- Follow the instructions provided by the product's manufacturer in preparing and re-coating the surface.

### Conductive, Electro-Static Dissipating & Anti-Microbial Systems

It is especially important to continually maintain conductive, electro-static dissipating, and anti-microbial flooring systems in a clean, film free condition to maintain the floor's effectiveness. Use of harsh detergents may attack the finish of the floor. Improper rinsing, resulting in residue remaining on the floor, may directly affect the ability of the floor to perform as designed. If hard water is used, a softener may be needed to prevent scum. Consult your floor's manufacturer for special considerations that may apply to your conductive, static-dissipating, or anti-microbial floor.

### Terrazzo Floors

Terrazzo floors require the least maintenance of all, and maintain a fine finish for the longest period. A well installed terrazzo floor with an appropriate seal coat requires little more than regular washing with a mild detergent, rinsing, and buffing to a high shine. The National Mosaic and Terrazzo Association, 3166 Des Plaines Avenue, Suite 121, Des Plaines, Illinois 60018, publishes complete information on the care of terrazzo and mosaic floors, and will be happy to provide it on request.

### Conclusion

As indicated earlier, seamless flooring systems are designed to produce dense, long-term, floor protection resistant to wear, chemical attack, and dirt penetration. Properly chosen and installed seamless flooring systems demonstrate superior resistance to wear and abrasion. A routine program is the best way to maintain the floor. In time, however, high traffic areas become noticeable. It is possible to renew many seamless flooring systems to their original appearance by cleaning and resealing with the appropriate finish as dictated by the system in place. Before this application, the floor system must be prepared by stripping all waxes, sealers, and other contaminants. It is also important to specify which flooring system was installed to maintain optimal performance of the system when resealing.