

Resilient flooring

Specialty products require their own installation and maintenance practices.

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According to ASTM F 141, Standard Terminology Relating to Resilient Floor Coverings, resilient flooring is an organic floor-surfacing material made in sheet or tile form, or formed in place as a seamless material of which the wearing surfaces is non-textile. By common usage, the classification includes, but isn't limited to, asphalt, cork, linoleum, rubber, vinyl, vinyl composition and polymeric poured floors.

When people hear the term resilient, they think of cushioned floors, something that is, literally, resilient. But under ASTM F 141, resilient doesn't necessarily define a physical property.

When I think of resilient flooring in the plant environment, I think of vinyl composition tile (VCT) and its predecessors, vinyl asbestos tile and asphalt tile. That, in turn, suggests inexpensive, bland designs and high maintenance. It's been around for so long that VCT still is selected because of familiarity and low initial cost. Outside of paint, VCT is still about the least-expensive flooring because of its easy, glue-down installation. VCT wears pretty well in a variety of traffic areas if it's well maintained. The downside is lack of design options and high maintenance cost because of its porous nature.

Products such as solid vinyl tile, rubber flooring, linoleum and cork are being used in more applications than ever for a variety of reasons. With more resilient flooring options, interior designers and owners are selecting floors other than VCT. More design variety, "green" characteristics and lower maintenance costs are three common reasons. Because these products are being used more often, it's important to understand them, know where to use them and learn how to take care of them.

Conventional maintenance procedures, including floor finishes, sealers and burnishing, have been standard for VCT for a long time. The fact that VCT doesn't do well without a floor finish makes maintenance of this product more expensive than other floors. These methods also can be used on most, but not all, resilient floors when a high gloss level is desired. However, there are many products that might be maintained with a low-maintenance program of mopping, auto-scrubbing and dry buffing without using floor finishes, providing the owner can live with a satin gloss finish. Some site-applied, semi-permanent, single-coat, water-based urethane products can maintain a high gloss for a long time without finishes or buffing.

When considering low-maintenance floor products or semi-permanent coatings, use a life cycle cost analysis. It confirms that even with a higher initial cost, the floor costs less over the long term and might have a lower environmental effect because less labor and fewer chemicals are needed for maintenance.

Enhanced vinyl for better looks

A new category of VCT is being marketed as high-performance vinyl, or vinyl-enhanced floor tile. Some of these are called resilient because manufacturers are terrified to use the word vinyl for fear of not being viewed as sufficiently green. I'd argue that many of the better-quality resilient products use green maintenance procedures, but that's an argument for another day.

These enhanced VCT products have higher vinyl content, which often means better performance and lower maintenance. But, the vinyl content isn't high enough to be called solid vinyl. They have designs beyond the common marbleized VCT look. You'll see tile patterns that mimic granite, natural linoleum, terrazzo or other designs, often in larger sizes to minimize the number of seams. They're installed like standard VCT, although the larger tiles require a larger tile cutter and the adhesive usually needs to be of a more expensive, better quality.

Solids for lower maintenance

Solid vinyl tile (SVT) has been around for decades, but has grown in popularity during the last 15 years because of interesting designs and easy maintenance. Often incorrectly

called luxury vinyl, these products are used in a variety of spaces, especially in health-care facilities and retail stores. The installation process is still glue-down, often with a wet-set adhesive that is a bit different to work with than VCT adhesive. Two-part reactive adhesives also can be used for excellent performance in wet or cold areas, areas with a lot of rolling loads or other high-traffic installations. The product conforms to ASTM F1700, Standard Specification for Solid Vinyl Floor Tile. Most popular are the Class III, Printed Film products, which have a clear wear layer over a photographic print film that emulates natural materials such as wood, stone, metal, slate and any number of other designs.

Although the clear vinyl wear layer is durable, stain-resistant and easy to clean, some very smooth-surface products might show more scuffing in high-traffic areas than a textured product. A buffing program might be needed to keep SVT looking good. That notwithstanding, it's possible to use a low-maintenance program without a floor finish on most SVT floors. If you're planning to use a conventional system on SVT to achieve a high-gloss finish, you'd be wise to do a test area first to check the adhesion of the floor finish. Because of the nonporous nature of some clear vinyl wear-layer products, it might be necessary to apply a single coat of sealer on a new floor to aid in floor finish adhesion.

A number of products coming on the market look like solid vinyl, especially those with a wood pattern. These non-vinyl or PVC-free floors look like printed film SVT vinyl but aren't. They're installed with a different adhesive and generally don't accept floor finish well.

Rubber hangs tough

Rubber is a time-tested floor covering material that has made a bit of a comeback because of its quietness, slip resistance and lower maintenance costs. This isn't the raised "coin top" flooring design you might be familiar with. Traditional marbleized smooth rubber is making a comeback in updated colors and texture options, in addition to recycled rubber tile and sheet, rubber/cork tile and sheet rubber flooring. Rubber stair treads still offer excellent durability, although vinyl treads are a cost-saving option for less-traveled stairwells. Stair treads, risers and wall base in aluminum, bamboo, laminate and wood are also available, so there are more design options than ever.

Rubber is one of the toughest and most durable flooring options for high-traffic areas.

Installing rubber flooring requires special adhesives. Additional adhesive precautions apply to using rubber on stairs, where a specific adhesive system is needed. You'll need to specify an epoxy nose caulking under the nose of the step to prevent cracking. The adhesive used on the tread itself might vary, depending on how much downtime can be tolerated. When short downtime is important, tape-based adhesive systems bond immediately. Standard adhesive installation usually costs less and allows the installer to tweak the tread position once it's set in the adhesive. This option might be preferred if the stairs can be shut down for 12 hours.

Rubber is used on floors and stair treads because of its slip-resistant quality. If you make it "shinier" by using a floor finish, you'll degrade its slip resistance. That's not to say that a floor finish makes a rubber floor slippery, only that rubber without the finish is less slippery. One-step cleaners containing detergent, waxes and polymers will clean the rubber, leave a film for a slight gloss and won't affect the slip resistance. Periodically clean textured rubber floors that have a circular or square design using a brush instead of a nylon pad to deep-clean the surface.

Linoleum for LEED

Linoleum has made a comeback since the early 1990s, and I'm not referring to sheet vinyl, which often is incorrectly called linoleum.

What's the difference? Real linoleum is made from linseed oil, pine rosin, ground cork, wood flour and a jute backing — all of which are natural ingredients. It's the good-old-fashioned natural linoleum like what my great grandfather used to sell. It's a common hard-surface flooring choice in green design products because it's a natural product and can help a project qualify for LEED points. Linoleum tile and sheet floor covering are tough, durable and work in almost any traffic area. Installing it is different than installing vinyl and other products, so have only experienced linoleum installers put it in for you.

Linoleum maintenance is different from vinyl maintenance, so get your staff some training before the floor is installed. Linoleum might have a factory-applied coating and might not require a finish. You'll need to find out who made the product and follow the OEM's guidance. Most important is avoiding high-pH strippers and cleaners, which can damage linoleum, leading many chemical manufacturers to develop cleaners and finishes

specifically for linoleum.

Linoleum installation and maintenance isn't difficult, it's just different. Linoleum is a beautiful, durable, environmentally friendly product that has been around for generations. Failures most often occur because of errors made during installation or maintenance. The manufacturers and flooring consultants have done a great job of developing training programs for dealers, installers and floor-care technicians. If your facility has a lot of linoleum, make it a priority to find time for training and education.

Grows on trees

Cork is another resilient flooring option whose popularity is increasing because of its greenness and softness, its sound-deadening and insulating characteristics, as well as its unique appearance. Although classified as resilient, cork floors act more like wood flooring in terms of handling, installation and finishing. Three cork flooring products are in common use today: traditional cork tile, cork floating floors and a hybrid product with a vinyl back, a vinyl wear layer with cork in the middle.

Traditional natural cork tile and cork floating floors are handled and maintained like wood. They're available either pre-finished or unfinished, to be stained and finished on site. Most traditional cork tile is supplied with a factory finish of urethane, acrylic, oil or wax. Urethane-finish cork is the most durable and appropriate for commercial use. Waxed cork requires a lot of maintenance and there aren't many maintenance people who know how to use paste wax anymore. Acrylic- and oil-finish cork is relatively new to the market and is being used for residential projects.

Never use conventional maintenance procedures on cork. Use a damp mop only and avoid wet mopping. Don't use standard floor finishes formulated for other resilient floors. It's not that they hurt the floor, but they can't be stripped because stripping chemicals could damage the cork. A periodic screen-and-recoat procedure is the best way to maintain a urethane-finish cork floor and prevent the factory coating from wearing off. The same is true for wood or bamboo floors with factory-applied urethane finish.

If you have a choice when selecting cork for high-traffic areas, homogeneous cork floor tile is more durable than veneer cork floors. If the factory coating wears off, homogeneous cork has color all the way through, so it can be sanded and refinished like a wood floor.

Veneer cork flooring has only a thin top layer under the factory finish and can't be sanded. Regardless of the finish, maintain cork like a wood floor: damp mop with not too much water. And, by all means, follow the manufacturer's maintenance guidelines.

With so many products available, it pays to stay trained and keep your staff up to date as well. The Institute of Inspection, Cleaning and Restoration Certification (IICRC) now offers Certified Resilient Floor Maintenance Technician courses and is offering certification in other hard-surface floor categories to meet demands for more specialized training. This is a great place to keep up with the latest in resilient floor covering products.

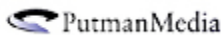
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