

Cleaning & Maintenance Management

Reprinted from the October 2008 Issue

Concrete Flooring Offers Hard Results

Eneref Institute examines how sustainable flooring shines for Ag-Pro in showrooms at Arkansas.

As the shift towards earth-friendly cleaning products intensifies, consider that some floor surfaces will take to “green cleaning” more easily than others.

It’s one reason why retailers are replacing vinyl composition tile with polished concrete floors.

Not only does polished concrete require significantly less maintenance to stay shiny, but it can also take better advantage of new green cleaning technologies.

“You can actually walk up to the showroom and see the blue sky shining in the floor, that’s how shiny it is,” says Richard Smith, Ag-Pro’s general service manager in Arkansas, who installed the environmentally friendly floor in two of their John Deere showrooms.

Polished concrete is a grinding process that transforms existing concrete floor surfaces into a new concrete floor with a stunning sheen and the ability to inhibit water or contaminants from penetrating the surface.

Concrete floors can cost half as much to maintain as vinyl composition tile (VCT) because VCT requires the laborious process of stripping the old wax off and then hours of buffing and shining the new wax.

“Over half of the floors we install

are going from tile to polished concrete,” says Joseph Urbanic, president of QuestMark Flooring.

For retail stores looking to save every penny, maintaining a VCT tile floor is costly.

Even industrial facilities are moving away from laying epoxies and urethanes on strait concrete floors, prefer-

ring instead the low maintenance cost of polishing concrete.

And, according to Urbanic, avoiding cleaning products that emit the volatile gases in VOCs is a lot easier when cleaning polished concrete.

“After we complete a customer’s floor, most just maintain it periodically with a dust mop and occasional scrubbing,” says Urbanic.

CLEANING AND MAINTAINING POLISHED CONCRETE VERSUS VCT

Typically, the coat on top of VCT is burnished and buffed to maintain its shine.

But periodically, the coat builds up and requires that it be stripped off and the process begin again.



Concrete flooring can produce shining results with environmentally friendly effects.

Polished concrete, on the other hand, is inherently easy to clean.

The polishing process reduces the surface area, or pores, that dirt can get trapped in.

The floor has a very flat, smooth surface texture so the dirt stays on top. It even requires less soap.

Restaurants prefer polished concrete because it's more sanitary; VCT can hold dirt and bacteria in the joints between tiles.

And, polished concrete is considered especially safe from slip and fall accidents.

ENVIRONMENTAL AND ECONOMIC BENEFITS

Both the installation and maintenance of polished concrete floors have positive environmental benefits.

Polished concrete floors don't employ VOC materials, the sheen actually increases the room's ambient light, thereby saving energy, and lastly, the technology increases the lifespan of the already existing concrete floors.

Typically, polished concrete floors are swept and mopped every couple of days, depending on the environment.

The very busiest big-box retail stores clean their polished floor more than once a day, but a low-volume retailer may clean the floor as infrequently as once every two weeks.

Maintaining the shine of their new floor has been easy for Ag-Pro, notes Smith.

"It's a lot easier to maintain because we sweep it, and it just stays clean," Smith says. "We periodically buff it, but that's to put the original high luster back on it."

The annual estimates for cleaning and maintaining a nice, bright shine on polished concrete run as little as nine

cents to 25 cents per square foot, depending on the level of shine you want to maintain.

This compares to 60 cents to \$1.05 for VCT.

The payback for installation is re-

"Over half the floors we install are going from tile to polished concrete" – Joseph Urbanic, QuestMark Flooring.

covered quickly because of the low maintenance cost.

THE RIGHT PRODUCT TO KEEP THE SHINE

Finding the right pH balance in a cleaner is crucial.

"When we first got involved with polished concrete we experimented with pH neutral. It turned out that if you use a little bit higher pH product, it's a better cleaner. So now we are recommending a cleaner with a pH of nine," says Urbanic.

A low pH product can hurt a polished concrete floor and actually etch the shine right off.

But, for Smith's Ag-Pro store, some cleaning problems simply disappeared, making it the greenest solution of all.

"Before, we had to have something sitting under rubber tires because the tire would stain the concrete — that's not a problem anymore," says Smith.

To maintain the high shine, Urbanic urges customers to stay away from pads.

Black pads can take the shine off the floor.

Instead of the colored polishing and buffing pads, Urbanic recommends a brush designed specifically for polished concrete, which does a better job and lasts a hundred times longer than pads.

The right brush can reach into concrete pores and pull out any dirt or smooth out micro-scratches.

CLEAN UP SPILLS BEFORE TROUBLE STARTS

One concern for all concrete floors is oil spills, which need to be cleaned up right away.

Oil can begin to penetrate the floor within 30 minutes.

Water, on the other hand, is much friendlier to polished concrete than to VCT as one retailer realized after some water pipes broke and flooded the floor.

The moisture caused havoc on the tile.

During a flood, tiles begin to push upward; eventually the tiles will need to be replaced.

Moisture can even pass up from the underside of a concrete slab through the tile.

With polished concrete, on the other hand, there's nothing to be rejected.

Acids, such as vinegar, need to be neutralized quickly with baking soda or an equivalent powder in order to stop floor etching.

Then, it's just a matter of cleaning up the wet powder.

After the baking soda dries, use a high speed burnisher to put back the shine.

Particularly attractive is that the floor is immediately accessible after cleaning so operations are not interrupted.

There is no waiting time for materials to cure.

QuestMark offers a product for maintaining and enhancing polished and exposed concrete floor surfaces. The National Floor Safety Institute (NFSI) has certified QuestMark's DiamondQuest floors to meet the slip co-efficient of friction (SCOF) for safety. For more information, visit www.questmarkflooring.com

Smith says he's very pleased using brushes instead of pads to scrub the floor because he eliminated the cost of replacing pads.

"We have not yet even worn one out," says Smith.

Smith does not consider his John Deere store an easy place to keep clean.

"If it will hold up under the conditions that we put it in, it will probably hold up under anything," Smith concludes.

For the most part, the maintenance community has joined the green band-

wagon.

Unfortunately, that means an additional workload in some areas of facility cleaning.

But, for those of us looking for eco-friendly floors, we now have an option of not more work, but less. ●



This article is an excerpt of the future Eneref report which assesses the impediments to building zero-energy urban communities in the US. A companion film documentary, The Eneref Project, will seek to demonstrate to key decision-makers how zero-energy communities can be commercially viable.