Flooring Standards Facility Cleaning Managers Should Know

Proper cleaning protocol gains traction in the fight against slip-and-fall injuries

BY KASSANDRA KANIA

Introduction

According to the Consumer Product Safety Commission (CPSC), slips and falls account for more than 1 million hospital emergency room visits a year — and the number of injuries continues to climb.

“Slips and falls go up every year because our population is aging, and the elderly are the most likely victims of slip-and-fall injuries,” says Russ Kendzior, founder and president of the National Floor Safety Institute (NFSI), in Southlake, Texas. “We estimate the problem is going to double — perhaps even triple — within the next 10 to 12 years.”

According to Kendzior, the NFSI is working diligently to advance floor safety standards, and manufacturers of cleaning products and equipment continue to support the institute’s efforts.

“We have a large number of companies that have submitted their products for NFSI certification, and that grows every year,” says Kendzior. “However, the floor covering industry has yet to adopt a uniform safety standard and has opposed the efforts by the NFSI to do such.”

Flawed Floor Standards

According to CPSC, floors and flooring materials contribute to more than 2 million fall injuries each year. To improve slip-resistance, flooring manufacturers adjust the floor's traction by applying an anti-slip coating to the finished product or mixing an aggregate into the formula during the manufacturing process. However, manufacturers are not required to disclose their products' coefficient of friction (COF), and there are no mandated floor safety testing methods.

ASTM's F6 resilient floor covering standards specify and test the physical and mechanical properties of floor coverings prior to installation, but the committee does not have a slip resistance test method. ASTM's D21 committee covering floor polishes has published D2047, a standard test method for static COF of polish-coated floors. However, Kendzior points out

that this method is outdated and imprecise because it tests floor finish under dry conditions, which are not considered hazardous.

“Currently there are no ASTM test standards for measuring COF, leaving the ANSI B101 standards as the benchmark for walkway safety,” he says.

The Tile Council of North America, a trade association for the ceramic tile industry, has issued a standard for measuring the slip resistance of ceramic tile — ANSI A137.1 — but Kendzior points out that this is not a safety standard.

“It’s creating confusion in the industry, because the Council wants you to believe it’s a safety standard when it isn’t,” he says. “It’s a quality control standard for uninstalled ceramic tile.”

The only floor safety standard the NFSI endorses for floor covering manufacturers is ANSI B101.3, which

measures the dynamic COF of common hard-surface floor materials.

“We’ve petitioned the CPSC to mandate that all floor covering manufacturers use this test method and uniformly label products with a standard label so that consumers and business owners know how slippery a floor is right on the box,” says Kendzior.

Steps To Improving Floor Safety

Due to the ambiguous nature of floor safety standards, Kendzior encourages cleaning and maintenance managers to educate themselves and make sure their voices are heard. One way they can take charge is by playing an active role in the selection of flooring for their facility.

According to Rob McNealy, president of the Safer Walkways Association, facility cleaning managers should have a say in the specification process for new builds and renovations.

Bill Griffin, president of Cleaning Consultant Services in Seattle, concurs: “The person in charge of cleaning should be involved in the selection of surfaces that go into these buildings,” he says. “An interior designer or architect seldom knows about cleaning or maintaining the facility.”

And when it comes to floors that are already installed, facility managers need to test them before and after maintaining them.

“I recommend an annual walkway audit of your facility to find out what your COF is on your floor surfaces and assess the potential risk of slips and falls,” says McNealy. “A lot of people don’t know that there’s a connection between COF and maintenance. For larger facilities, it may be more cost-effective to take NFSI’s training program to become an in-house auditor.”

NFSI courses include Tribometery 101, a class that teaches facility managers how to use various testing devices, including a tribometer; an instrument that measures the coefficient of friction between two surfaces.

Geared For Safety

Facility cleaning managers may not always have a say in the type of floors installed in their buildings, but they do have a say in how those floors are cleaned. And according to consultants, the best defense against slips and falls is a properly maintained floor.

“Improper cleaning is the number one thing that can take a safe, high-traction floor and make it unsafe,” says McNealy. “Based on what I see in the field, that’s an epidemic, in my opinion.”

Griffin prescribes a regular mopping and scrubbing schedule, as well as a stripping and recoating process if needed.

“A clean floor is almost always less slippery than a dirty floor,” he says. “Contaminants, whether grease or soil, act like roller bearings under your feet.”

According to Joel Craddock, president of Doc’s Facilities Consulting, Rochester, New York, the biggest misconception in the industry is that shiny floors are slippery.

“It’s actually the opposite,” he says. “The shinier the floor, the higher the COF when you’re on a resilient floor that has floor finish. When the floors get dull, that’s when they’re more slippery.”

Housekeeping departments should stick to using cleaning products that are certified high-traction by the NFSI, and focus on training custodians to use the correct product for the type of soil being removed.

In addition to cleaning on a regular basis, custodians should pay close attention to dilution ratios, as improper mixing of chemicals is often a contributing factor to slick floors. Floor equipment should be kept clean, and dirty water should be discarded frequently.

“Dirty mop water should be changed often, otherwise you’re adding soil to the floor,” says Craddock. “You also need to train custodians to use proper mopping techniques. Mop the edges first, then the center, making a figure eight as you walk backwards.”

Craddock also stresses the importance of sweeping and dust mopping floors prior to cleaning them.

“Sweep and pick up pieces of debris that people can trip over,” he says. “Then remove any stickers or gum with a long-handled razor scrapper, and dust mop the floor with a treated or untreated dust mop, followed by proper mopping techniques. If you’re burnishing, re-dust mop the floor afterward because parts of that pad can break off and become like marbles under your feet.”

Signs Stop Slips And Falls

Too much moisture on floors can also up the slip factor, whether it's due to excess cleaning solution, improper dry times or inclement weather. Regardless of the cause, consultants emphasize the importance of using wet floor signs — and using them correctly.

"Typically, people don't use enough wet floor signs," says Craddock. "If you have a long hallway, for example, you need a sign at either end and one at every doorway. So if you have a hallway with 30 doors, you need to have 32 signs."

In addition to posting enough wet floor signs, custodians need to place them in the correct spots.

"Often, you walk into a building and there's a wet floor sign in the middle of the wet floor," notes Kendzior. "By the time you see the sign, it's already too late. Make sure to post signs around the perimeter of the hazard."

Kendzior also urges facilities to remove the signs once the floor is dry.

“Sadly, so many companies leave the wet floor sign out all day,” he says. “People become immune to that and tend to ignore them.”

A wet floor sign is also beneficial if water is being tracked into the building — as is a good matting program. Griffin suggests swapping mats out several times a day during very wet weather. Walk-off mats should be long enough for a person to walk eight to 10 steps and should also follow traffic patterns to increase safety.

“If you roll out a 15-foot walk-off mat, but traffic goes over to a concierge desk at the left and elevators off to the right, the walk-off mat is never used,” notes Craddock. “So you have to have two mats in a V-shape going in different directions.”

Craddock also cautions facility managers to check mats for potential trip hazards, such as curling at the edges or bunching up on hard surfaces.

“Make sure your mat is good quality,” he says. “It’s best to spend $10 more on a good mat that prevents slips and falls because one slip-and-fall injury could set you back $60,000-plus.”

Most importantly, facility cleaning managers need to train staff and document all cleaning procedures on an ongoing basis to protect their business in the event of a slip-and-fall injury.

“Have a five-minute safety meeting at the start of every shift,” Griffin suggests. “Form a committee to talk with the risk manager and insurance company to identify risks or incidents that have happened in the past. Focus on identifying and preventing those from happening again, because prevention is cheaper than a lawsuit.”