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SHOPPING CENTER BUSINESS

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New ANSI Floor Standards Designed For Safety

While new standards increase safety concerns, they also help protect shopping center owners.

Dawn Shoemaker

Hold on to your hats, the following statistics may surprise you. Every year in the United States, more than 20,000 people die as a result of slip-and-fall accidents. Accidental falls, occurring at home, at work or in public places, such as shopping centers, are the leading cause of emergency room visits in this country. And falls are the leading cause of death for those over the age of 85.

Approximately half of all slips, trips and falls are attributed to the condition of the floor. Floor condition can refer to wear and tear, but it can also refer to quality of maintenance as well as the type of floor.

This new standard ANSI B101.1 identifies methods to test the traction levels of many hard-surface floor types, including wood, vinyl, ceramic tile, laminates and concrete, as well as stone floors such as marble and granite.

For instance, some 80 percent of slip-and-fall insurance claims occur because the floor was wet or otherwise "contaminated," making the floor slippery. Also, a high-gloss floor, such as a marble floor, has potentially less traction to help prevent a slip-and-fall accident than a more conventional vinyl floor. Worse, marble and similar high-gloss floors may mask wet spots, contributing to accidents as well.

Because the number of slip-and-fall accidents is so large and is expected to increase as the baby boomer population gets older, organizations such as the National Floor Safety Institute (NFSI) and the American National Standards Institute (ANSI) have been working on a new set of standards to help prevent slip-and-fall accidents. Doing so will not only help save lives and prevent injuries but will also help reduce the number of costly lawsuits and insurance claims filed each year as a result of such accidents.

The Wild, Wild West Of Safety

It's hard to believe, but until recently, there really was no one set of floor-safety standards in the United States. That means one floor-covering manufacturer might develop a floor and determine its safety by one set of standards while another manufacturer is using another criteria. The standards, performance characteristics and classification of traction levels of floors often varied considerably, which is why Russ Kendzoir, president of NFSI, referred to it as the "wild, wild west of floor care safety."

However, all that has changed as of November 2009 with the release of ANSI B101.1. This new standard identifies methods to test the traction levels of many hard-surface floor types, including wood, vinyl, ceramic tile, laminates and concrete, as well as stone floors such as marble and granite.

What is also helpful is that these testing methods can be used in a laboratory, at the manufacturer's location or in the field in real-life situations. They determine the wet static coefficient of friction — which is the risk of slipping when walking from a complete stop (referred to as static coefficient of friction) onto a wet floor. This compares with Europe and other countries' dynamic or continuous walking system for evaluating floor safety.

The new standard splits traction into three ranges: high, moderate and low. The highest level of traction is found when floors measure a wet static coefficient of 0.6 or greater; for shopping center properties, this is recommended. Shoppers walking on floors with this rating, whether the floor is wet or dry, should be relatively safe from any type of slip or fall due specifically to the floor or its maintenance.

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Automatic scrubbers are recommended for large facilities like shopping centers. The systems can apply cleaning agents to the floor, scrub the solution into the floor and vacuum the same areas all in one pass.

Finally, to be able to put the new standards into practice, a labeling system is in the works so facility managers and cleaning professionals can immediately determine the coefficient rating of a floor, cleaning or related product. The label will resemble a gas gauge divided into three colors: green, the highest (and safest) rating with a value of 0.6 or greater; yellow, indicating a value of 0.4 to 0.6; and red, indicating values less than 0.4 or minimal traction.

The tests will be conducted independently by third-party certifiers such as NFSI. At this time, the entire testing and certification procedure is voluntary; however, a few major home improvement centers indicate they will now require this labeling on cleaning products and finishes used for floor care. It is expected that as more end users and the general public become aware of these new standards and certification system, more facility managers and cleaning professionals will want to make sure their floors and floor care products have either a green or at least a yellow rating.

Steps to Take Now: Proper Maintenance

Although shopping center managers can do little about the floors already installed in their facilities, there are a number of things they can do to make sure their floors are safer, according to Mike Schaffer, president of Tornado Industries, a leading manufacturer of professional cleaning equipment.

“Much of this is just common sense,” he says. “Make sure floors are patrolled regularly to remove debris and mop up any spills and install effective matting systems at all key entries.”

Schaffer also suggests placing mats in front of elevator banks and at either end of escalators. “These mats help remove remaining soils and moisture from shoe bottoms, preventing it from spreading to other locations of the shopping center and make sure the first step off the elevator or from an escalator is on a safe, dry surface.”

As to chemicals and finishes used in floor care, Schaffer indicates that the NFSI already certifies many of these products and awards those that have proven safest with a high traction rating. This rating complies with the risk categories established by the new ANSI B101.1 standards.

“When it comes to floor care equipment, a shopping center or similar large facility should use an automatic scrubber to clean floors,” says Schaffer. “These systems apply cleaning agents to the floor, scrub the solution into the floor and then vacuum the same areas all in one pass. This removes moisture and soils and ensures that floors dry quickly.”

When selecting an automatic scrubber, Schaffer says, look for these attributes:

• Select a “world class” machine. This means the machine is designed to work on a wide variety of floors and meets specific standards as to craftsmanship, durability, versatility and comfort for a broad diversity of users.

• Machines made with a rotomold, polyethylene body are lighter than metal machines, have proven to be exceptionally durable and don’t rust or dent like metal machines.

• To reduce downtime, a machine with a clam shell design opening allows for easier access to tanks, batteries, motor and other components.

• AMG-type batteries are recommended because they are safer for the user and more eco-friendly.

A Safer Future

Many facility managers and cleaning professionals believe the new standards are a long time in coming, yet are glad they are here. “They are going to elevate floor safety considerably,” says Schaffer. “Having clean and shiny floors is important, but with the new standards and certifications we can have clean and shiny floors that are also very safe. That is the benefit of these new standards.”

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How to Measure Coefficient of Friction of a Floor

Several manufacturers produce equipment that can measure the coefficient of friction of a floor. Many of these machines are relatively easy to use and their costs are marginal. Although the way they operate may vary, the most common

method of measuring slip resistance uses a 50-pound weight placed flat on a leather heel base, which is then placed flat on the floor surface being tested. The heel-and-weight assembly are then pulled across the surface. The machine then measures and records the maximum amount of force (in pounds) needed to start the assembly in motion. This measurement is divided by the weight (50 pounds) and yields the coefficient of friction value.

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