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Change Language:

Restaurant Floor Care — A Top Priority

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Don't Sli Up

Restaurant facility management can make floors safer and more cost efficient by elevating the mindset of floor care to floor safety. With that goal in mind, let's take a look at ANSI and OSHA standards, insurance company priorities, operational steps, risks and rewards, and a selection of NFSI-certified products.

Slippery floors are common in restaurants and are a major factor in same-level falls, which are the leading cause of injuries among restaurant workers. According to Liberty Mutual research, same-level falls account for 25 percent of restaurant worker injuries in the United States. Standards, when applied, can help reduce the risks. Understanding the definition is equally important.

OSHA's proposed new rules may also require that employers have in place an effective housekeeping program (including floor care), which must be inspected by a qualified person.

Definitions

Coefficient of friction (COF) measurement methods - SCOF and DCOF: Two test methods exist to measure surface traction. The first method measures the force required to move an object of known mass from its resting position on a surface. The force is then divided into the total mass of the object, and this ratio is referred to as the static coefficient of friction (SCOF).

The second test method measures the force required to keep an object in motion. Since the object (or test sensor) is in motion (or dynamic) and therefore is not stationary, only the force to keep the object in motion is being measured. This test method is referred to as dynamic coefficient of friction (DCOF).

High traction: The new term used to replace the less precise term "slip resistant." High traction is defined as "the physical property of a floor or walkway designed to prevent slipping during normal walking by providing a reasonably sufficient level of available contact friction." There has never been a test method by which to measure or identify that a walkway is slip resistant; however, high-traction walkways can be tested to a national standard.

ANSI Standards

The American National Standard Institute's (ANSI's) B101 Committee has released these vital preventative standards, with more to come: ANSI/NFSI B101.0-2012 Walkway Surface Auditing Procedure for the Measurement of Walkway Slip Resistance (or Traction)

ANSI/NFSI B101.1-2009 Test Method for Measuring Wet SCOF of Common Hard-Surface Floor Materials

ANSI/NFSI B101.3-2012 Test Method for Measuring Wet DCOF of Common Hard-Surface Floor Materials

ANSI/NFSI B101.5-2012 Standard Guide for Uniform Labeling Method for Identifying the Wet Static Coefficient of Friction (Traction) of Floor Coverings, Floor Coverings with Coatings and Treated Floor Coverings

ANSI/NFSI B101.6-2012 Standard Guide for Commercial Entrance Matting in Reducing Slips, Trips and Falls

Application of these standards is not difficult, but it calls for basic knowledge, training—integration in a system approach—and under new OSHA rules, inspection of floors by qualified persons.

OSHA Rules

New proposed rules per OSHA's Walking and Working Surfaces (29 CFR Part 1910) require designating a qualified person to inspect walkways to help ensure that they do not represent a hazardous or dangerous condition for employees.

OSHA defines a "qualified person" as "a person designated by the employer who is knowledgeable about and familiar with all relevant manufacturers' specifications and recommendations; is capable of identifying existing or potential hazards in specific surroundings or working conditions which may be hazardous or dangerous to employees; and has been trained for the specific task assigned. When work is to be supervised by a qualified person, the qualified person shall have the necessary authority to carry out the assigned work responsibilities."

OSHA's proposed new rules may also require that employers have in place an effective housekeeping program (including floor care), which must be inspected by a qualified person.

Note: Many experts believe that OSHA may require COF testing of floors as a means of "identifying existing or potential hazards in specific surroundings or working conditions which may be hazardous or dangerous to employees." Currently the only nationally recognized COF test methods are those published by the ANSI/NFSI B101 committee, which define walkways with a wet SCOF of 0.60 or greater or wet DCOF of 0.42 or greater as high-traction under the ANSI/NFSI B101.1 and ANSI/NFSI B101.3 standards, respectively.

Becoming Qualified

The NFSI has been providing a wide range of training programs since 1997 and in 2006 began certifying walkway auditors. The NFSI Certified Walkway program is a four-day class which candidates learn a wide range of topics such as how and why slips and falls occur, risk management techniques to slip and fall prevention, how to identify common types of flooring materials and the industry standards that apply to slip, trip and fall prevention. Candidates then gain hands-on experience by using a wide range of tribometers to which they must demonstrate proficiency through examination. The NFSI Certified Walkway Auditor program is in the final stages of becoming ANSI accredited. The NFSI will soon be expanding their training curriculum to include an OSHA Walkway Safety Management program, which is based on the proposed ANSI/NFSI B101.8 Floor Safety Management Program for Slip and Fall Prevention.

Insurance Priorities

CNA, Liberty Mutual, Zurich, Wausau and many other insurance companies have identified simple ways to prevent slips and falls in restaurants, resulting in physical and financial benefits.

In a 2010 white paper published by CNA Insurance titled "New Techniques to Control Slip and Falls in Public Places," research showed that same level slip-and-falls represented 61 percent of all general liability claims and 61 percent of the total claims dollars spent. The study revealed that a leading cause of restaurant slip-and-falls was the direct result of improper floor maintenance. "The results showed that slip resistance improved after a floor was properly cleaned and actually got worse if proper cleaning procedures were not followed" and recommended that restaurant owners and managers can lower their risk of a slip-and-fall if they use an NFSI-certified high-traction floor covering and a maintenance program.

Liberty Mutual research also revealed a big jump in the number of slip-and-fall claims, stating that "the rate of slipping was 15 times higher on contaminated [restaurant] floor surface. For each 0.1 increase in the...COF, the rate of slipping decreased by 21 percent." Their research also has shown that "slip-resistant shoes reduced the rate of slipping [in restaurants] by more than 50 percent." According to Wayne Maynard, Manager of Technical Services and Product Development for Liberty Mutual's Loss Control Advisory Services: "Slip-resistant shoes and proper floor cleaning are two very important and effective components of a prevention strategy."

Zurich insurance highlighted causes of slips and falls, citing "surface composition, surface conditions and foreign substance potential" as three major factors in accidents. The Employers Insurance Company of Wausau urged a major fast food franchise to "make good housekeeping a priority. Clean up spills immediately, no matter how small."

Operational Steps, Risks and Rewards

Per Liberty Mutual: “[Our] findings make a strong case for the development of effective floor-cleaning policies that include procedures for removing debris such as food, spilled drink and other objects from the floor.” Keeping floors clean and dry is key, but based on NFSI research, restaurant workers can’t clean a restaurant floor with just a mop and bucket, even though perhaps 55 percent of them still use this old-fashioned approach.

Floors need brushing, and rinsing, because they have microscopic pores—often with absorption rates of 5 percent or more—that otherwise trap film-forming soils, grease, detergent and soap residues and form a slick polymerized film over time. Exacerbating this, floor-cleaning chemicals often emulsify grease and oil particles, requiring thorough rinsing to prevent buildup.

Liberty Mutual further cautions that using hot water rather than cold does not work well for enzyme-based floor cleaners since the enzymes are deactivated by heat. Instead, use NFSI-certified floor-cleaning product, follow instructions, brush the surface and rinse.

Selection of NFSI-certified Products

An NFSI-certified product is one that has passed a series of two levels of testing, which include Phase I laboratory testing and Phase II field-testing. Phase I is a pre-qualifying screening of a product by testing its COF via the use of an NFSI-approved slip meter (tribometer) per the appropriate COF test method:

- ANSI/NFSI B101.1-2009 (wet SCOF on flooring material or coating)
- ANSI/NFSI B101.3-2012 (wet DCOF on material or coating)
- NFSI 101-B (chemical cleaners or treatments).

Products that pass Phase I testing are eligible for Phase II evaluation, whereby the product is placed in a real-world field test for a minimum of 30 days. Upon completion, the product is again tested per the appropriate NFSI/ANSI test method. If it has demonstrated the ability to maintain its required level of COF, the product will be certified as high traction. Products that have met this requirement are labeled using the NFSI-certified label, shown above.

A Comprehensive System Approach to Acting Responsible

Much more is involved than just cleaning to prescribed standards.

Liberty Mutual’s Maynard cautioned: “[cleaning and other solutions] must be incorporated into a comprehensive slip-and-falls management process that incorporates many other components, including management responsibility, education and training, floor surface selection and treatments, hazard surveillance and assessment, and warning signs and instructions.”

Simply stated: A floor care program becomes a floor safety program when restaurant management acts responsibly and holistically.

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NFSI-Approved Tribometers

The National Floor Safety Institute has announced the first NFSI-approved tribometers to enable effective field measurement of walkway traction, based on the wet COF of floors, part of a comprehensive floor safety program.

NFSI has approved these devices based on seminal research resulting in the standard titled “Standard Method for Conducting an Interlaboratory Study to Establish Validity, Repeatability and Reproducibility of a Walkway Tribometer Measuring Wet Static Coefficient of Friction (SCOF) for a Common Hard-Surface Walkway.”

The standard evaluates and verifies the validity, repeatability and reproducibility of data produced by instruments and methods employed to evaluate the wet—not dry—SCOF of common hard-surface floor materials, such as ceramic, porcelain, polished stone, vinyl, wood laminates, and coatings, polishes, etc., across a typical traction range.

An assessment of wet walkway traction is a better barometer of floor safety than an assessment on a dry floor, and NFSI-approved tribometers supply this metric with the goal of raising floor care to floor safety via high-traction floors. A current list of NFSI-Approved tribometers is available on the NFSI’s website at www.nfsi.org.