

# SAFETY BULLETIN

## *PART 2: SLIP, TRIP and FALL*



## REDUCING SLIP AND FALL INCIDENTS BY MAINTAINING HIGH-TRACTION FLOORS

According to CNA Insurance, in a real estate industry study, slip-and-falls in public places are the leading cause of premises liability injuries. Many insurance companies, regardless of the industry they serve, will tell you that slip, trip and fall incidents make up the majority of their general liability claims. From a workers' compensation perspective, slip, trip and fall accidents are the leading cause of lost work days and account for the majority of workers' compensation claims in the U.S.

# REDUCING SLIP AND FALL INCIDENTS BY MAINTAINING HIGH-TRACTION FLOORS

The culprit, in most cases, is unsafe walking surfaces. According to research performed by the National Floor Safety Institute (NFSI), unsafe walking surfaces are the number one cause of slip, trip and falls, accounting for 55% of these types of injuries.

The term “slip-and-fall” is somewhat misleading in that it is generic in nature and typically refers to an incident resulting in a fall from either slipping or tripping. In technical terms, a slip-and-fall incident occurs when there is a loss of friction or traction between a person’s foot and the walking surface causing a loss of balance, resulting in a fall. The term “trip-and-fall” occurs when a person’s foot is met with resistance from an object or an uneven surface causing a loss of balance resulting in a fall. Simply put, “slip-and-falls” are caused by slippery surfaces, and “trip-and-falls” are caused by uneven surfaces. It is important to recognize the difference between the two, because both the cause and the loss prevention techniques to reduce the end result of “falling” can vary significantly. Hence, an organization’s risk management efforts need to address mitigation strategies for both slip-and-fall exposures and trip-and-fall exposures. This Safety Bulletin will focus exclusively on slip-and-falls and the available loss prevention techniques to reduce these exposures.

To effectively reduce slip-and-fall injury exposures, businesses should develop a comprehensive floor safety program. The key element to a floor safety program, as it pertains to slip-and-falls, is maintaining High-Traction floors throughout an organization’s facility. The following risk management techniques will help businesses maintain High-Traction floors.

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## *COEFFICIENT OF FRICTION (COF) TESTING*

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The American National Standards Institute (ANSI) in conjunction with the NSF1 developed walkway testing standards in an effort to improve floor safety and reduce slip-and-fall exposures. Today, tests can be performed in the field to measure the slip resistance level of a walking surface with a great deal of accuracy. These tests can determine the Static Coefficient of Friction (SCOF) and the Dynamic Coefficient of Friction (DCOF) when the floor surface is wet. The results of the measurements from these tests can be compared to the traction ranges contained in the ANSI national

consensus standard. Compliance with the ANSI standards can be extremely beneficial to an organization in helping reduce slip-and-fall incidents. In addition, the documentation obtained from the testing can be an important factor in increasing an organization's defensibility in the event an incident does occur. The key message here is that organizations are strongly encouraged to take proactive measures and have baseline measurements performed by a qualified ANSI Walkway Auditor Certificate Holder (WACH) throughout their facility. Walkways with a wet SCOF of 0.60 or greater are defined by the ANSI B101.1 standard as "High-Traction" and present the least amount of risk for a slip-and-fall incident. Walkways with a wet SCOF below 0.60, but greater than 0.40, are defined by ANSI as "Moderate-Traction," and walkways with a wet SCOF of less than 0.40 are defined as "Low-Traction" and present the highest risk for a slip-and-fall incident. Learning that, according to ANSI standards, your walkways are not High-Traction AFTER a slip-and-fall claim, or law suit, has occurred can be a painful and very expensive lesson.

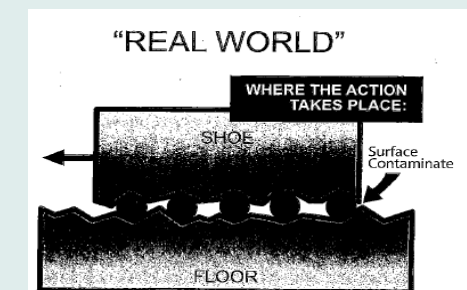
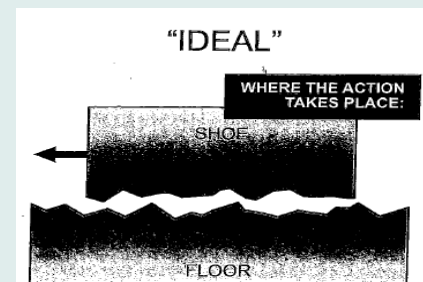
## IMPLEMENTING THE PROPER FLOOR CLEANING PROCEDURES

Proper cleaning is the most important aspect in maintaining High-Traction floors. In fact, the most common reason for Low-Traction floors is due to improper and/or infrequent floor cleaning. Most slip-and-fall exposures can be eliminated simply by implementing proper cleaning procedures and using the right tools and equipment.

Over time, cleaning chemicals as well as contaminants (such as soil and grease) fill in the pores and valleys of the floor surface forming a wax-like film, resulting in a reduction of floor surface traction. Studies have shown that the traditional mop and bucket cleaning method typically contains dirty, contaminated water, which actually helps fill in the pores and valleys of the floor surface. This cleaning method spreads more contaminants than they remove, failing to actually clean the floor surface and making them even more slippery. A build-up in chemicals and contaminants can defeat even the best non-slip floors.

While floor cleaning procedures may vary depending on the type of flooring and cleaning product used, in general terms, floor cleaning should involve the following principals:

- a. Use the proper cleaning chemicals for the specific floor surface involved
- b. Using the proper amount of cleaning chemicals
- c. Floor scrubbing



FIGURES FROM NFSI

#### d. Floor drying

Different types of floors often require different types of cleaning chemicals. It is essential to follow the manufacturer's specifications as to which chemical, and how much, should be used on a particular floor. Too much chemical can leave a residue, and too little chemical doesn't clean the floor. Both of these situations can reduce floor traction. The National Floor Safety Institute (NFSI) can assist businesses in locating proven High-Traction products that are compatible with a particular floor surface.

The most often neglected portion of an organization's floor safety program is ensuring that employees are properly trained and held accountable to sufficiently scrub and dry floors as a part of the overall cleaning process. Almost all slip-and-fall incidents occur when floors are wet or dirty, as people rarely slip on clean dry floors. That is why it is critical to ensure that floors remain clean and dry before pedestrians are allowed access to them. No matter what cleaning chemicals are used, floors will remain dirty and wet if they are not properly scrubbed and dried.

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### *CLEANING PRODUCTS*

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There are new cleaning products on the market that incorporate the above principals and do not involve mopping. An effective cleaning system involves using a trolley bucket instead of a traditional floor cleaning bucket. A trolley bucket dispenses fresh cleaning solution onto the floor from a spigot under the bucket. After the cleaning solution is dispensed, the floor can then be scrubbed using a deck brush and dried using a squeegee or a microfiber flat mop. Additional components can be added to some trolley bucket systems such as a wet vacuum with a bucket-mounted, or wand-mounted, squeegee head. With the added components, the floor can be vacuumed to remove the moisture and contaminants after the solution is dispensed and the floor is brushed. The link below is an example of a floor cleaning system that incorporates the cleaning methodologies listed above.

[http://www.kaivac.com/vid\\_74-8-Cleaning-Floors-with-OmniFlex-Dispense-and-Vac](http://www.kaivac.com/vid_74-8-Cleaning-Floors-with-OmniFlex-Dispense-and-Vac)

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### *CONCLUSION*

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There's no denying the tremendous impact slip-and-falls can have on an organization. Floor testing and implementing the correct cleaning procedures is the key in maintaining High-Traction floors and should be an integral part of an organization's floor safety program. Regular and routine COF testing on floors to the national standard can provide valuable information that can help protect against slip-and-fall

incidents and the litigation that often follows. In most cases, annual testing from a qualified third party would suffice as a documentation tool that would demonstrate the effectiveness of a facility's floor safety program. Organizations can also purchase a slip meter (tribometers) to perform coefficient of friction "spot" testing on their own. However, they should purchase an NFSI-approved device and ensure that individuals performing checks are an ANSI Walkway Auditor Certificate Holder.

Implementing effective cleaning procedures by using proven High-Traction cleaning products and ensuring that the proper cleaning procedures are executed will help maintain clean and dry floors and reduce the likelihood of slip-and-fall incidents.

For a listing of approved slip meters, information on High-Traction cleaning products, how to locate a walkway auditor near your facility, or how to become a Walkway Auditor Certificate Holder, go to [www.nfsi.org](http://www.nfsi.org).

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If you or your staff have any questions concerning this important Safety Bulletin, please contact us today.



**RICH POWERS, ARM**

Executive Vice President, Risk Services  
American Specialty Insurance & Risk Services, Inc.  
rpowers@americanspecialty.com  
260.755.7251 Direct  
260.341.7989 Mobile