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## **Studying Your Facility's Floor Can Help Lessen the Risk of Slips and Falls**

The U.S. Department of Labor reports that slips, trips and falls cause 15 percent of all incidental workplace deaths each year. One of the chief contributors to the number of falls is the type of flooring used within company facilities.

The good news is that there is a scientific way to prevent slips, trips and falls. By measuring your floor's coefficient of friction (COF) you can take preventive actions which reduce injuries and lower your company workers' compensation costs.

The COF is a number that indicates the slip-resistance level of your facility's floor. The COF level is measured with an automated device called the Binary Output Tribometer, or BOI-3000, which senses the slip resistance of a surface. To determine how safe your floor is or isn't, you also need to measure the static coefficient of friction (SCOF).

The SCOF is the ratio between the horizontal force necessary for an object to begin sliding and the normal force pressing an object to the surface. OSHA says that a SCOF of 0.5 is a reasonable measure of slip resistance. The American National Standards Institute recommends a SCOF of 0.5 for walking surfaces under dry conditions, and a SCOF of 0.6 on wet surfaces.

Measuring is typically done when the floor is wet. The theory is that if the floor is slip-resistant when wet, it will be slip-resistant when dry. If after measuring your floor's SCOF you find that it is less than 0.5, you can remedy the condition by applying a specialized treatment to the surface to increase wet slip resistance. There are two types of products designed for this purpose:

- Surface modifiers - These increase traction levels on concrete, ceramic tile, quarry tile, stone, marble and other similar floor surfaces by chemically altering the mechanical properties of the minerals within these floor types. This process creates an undetectable tread pattern that makes these floors safer when wet. In addition, if you apply a penetrating sealer, the surface will become more resistant to soil, increasing its safety when dry.
- Mop-on cleaners or treatments - These increase traction levels on finished floors. The water-based, pH neutral solutions contain ingredients that increase slip resistance, but must be used routinely to be effective.

Another approach to reducing risk from floor-related falls is to install slip-resistant flooring material such as textured, serrated or punched surfacing, or even steel grating. These types of floor surfaces are recommended for work areas that are generally slippery when wet, oily or dirty.