

Master Brewers

Safety Toolbox Talk



Flooring in Breweries Series: Introduction and High-Level Safety Items

The MBAA Brewery Safety Committee will be presenting a multipart Toolbox Talk (TBT) series on flooring in breweries. This series will address flooring design, safety, chemical interactions, and other items. It is intended to assist breweries in the proper installation, as well as maintenance, of one of the most overlooked items in a brewery that can cause safety-related issues. Flooring is the base of safety for a brewery. It is where our employees, vendors, and guests must walk to experience the wonderful beer that is made. In this TBT installment, we will address some of the high-level safety items that must be considered for brewery floors.

Let's start with two definitions:

- A slip is when there is not enough traction between your foot and the surface on which you are standing, which can cause a sudden loss of balance.
- A trip is when your foot or leg comes into contact with another object, and the momentum from your upper body causes your body to fall forward or backward.

Slips, trips, and falls are a leading cause of workplace injuries and have been related to fatalities as well. Many situations can cause a person to slip or trip: items blocking aisles and doors, slippery surfaces, damaged floors, etc. Federal regulation [29 CFR 1910.22\(a\)\(1\)](#) states that all walking-working surfaces are to be kept in a clean, orderly, and sanitary condition. Federal regulation [29 CFR 1910.22\(a\)\(2\)](#) states, in summary, that the floor in each workroom must be clean and feasibly dry. If there are wet processes, there must be drainage that is maintained, and dry standing places must be provided. The typical process areas of many breweries are often wet due to how beer is made and the sanitation that is required. Wet floors increase the potential for people to slip and fall, causing injury. For this reason, some breweries install textured or slip-resistant floors, but this can lead to sanitation issues and, if not maintained correctly, can create additional slip or trip hazards. It is important to understand that footwear can play a big part in how we maintain good contact with the floor surface. The National Institute for Occupational Safety and Health (NIOSH) states that slip-resistant shoes have rubber soles and tread patterns that allow the shoe to grip the surface. The effectiveness of a variety of slip-resistant shoes was detailed in a [NIOSH study](#) conducted with school food-service workers. We can obtain some very valuable take aways from this research. The study included 17,000 participants and showed a 67% reduction in injury claims among workers who wore shoes with a high slip resistance

rating. This is huge. Breweries could work with professionals that supply work shoes to determine the best ones for their environment and create a list for employees. If the brewery has a shoe reimbursement program, it would be very easily managed and would likely result in savings from reductions in injuries and lost time for employees from work related to these injuries.

When breweries conduct a hazard analysis ([TBT Hazard Analysis](#)) and determine there are locations in which employees must work for extended periods of time where the floor will potentially be wet, floor mats or additional drain systems could be considered as a potential solution. However, not all mats are equal. It is important to look at mats that allow water to flow away from the employee, do not become trip hazards, and do not soak up water. We will discuss this topic further in future TBTs.

Another item of concern is floor drains, or trench drains. If these are not installed correctly, it can cause water to back up in the operations area. It can also lead to potential trip hazards or even the possibility that an employee can step into the drain, causing injury. The floors around the drain must be designed in a way that allows the water to flow easily into the drain. The drain itself must be designed with the appropriate size pipe and grade to allow the water to leave the area. This is another topic that will be discussed further in future TBTs.

It also is important to understand how the floor surface interacts with water or chemicals and how this interaction can lead to a slippery surface. Such interactions can lead to premature degradation of the floor as well, causing cracks, holes, or other damage. In a future TBT, we will discuss how chemicals interact with flooring and what steps can be taken to prevent significant damage or premature failure of a flooring system.

As described here, the brewery floor is a very important and integral piece of the brewery safety puzzle. There are many items that need to be considered as we design new breweries or retrofit existing buildings for our breweries. The hope of the MBAA Brewery Safety Committee is that over the course of this multipart TBT series on brewery floors we will spawn conversations and questions and develop resources to help you maintain a healthy and safe floor to keep you brewing for a long time.

If you have questions regarding flooring in breweries, please see your supervisor/manager or contact a member of the Safety Committee for additional information.