Slips and trips
Entrances

Introduction

The entrance to a building is a critical area for controlling slip risk by preventing water being walked onto potentially slippery flooring inside. The entrance system consists of the external floor surface, any canopy present, the door, the matting and the floor immediately inside the building.

Assess how effective the access entrance system is at preventing water entering the building by studying the entrance on a rainy day. Is water walked into the building and, if so, how far does it enter? When evaluating the design of your entrances, consider the following:

External surfaces

The floor immediately outside the building can affect how much water is brought in at entrances. For example, block paving tends to drain more effectively than tarmac meaning there is less water being picked up on people's shoes on their way into the building.

Canopy design

The canopy should shelter the building entrance reducing the amount of water coming in. To be effective, the canopy needs to be well designed. Canopies are often artistic design statements outside entrances rather than a functional part of the building. Consider the height and size of the canopy and the prevailing wind; rain does not always fall vertically.

Doors

Ideally, doorways should not face the prevailing wind to reduce the risk of rain and leaves, etc. being blown into your building, but this is difficult to change once the building is constructed. The design of the door can influence how likely water is to come in at the entrance. Consider whether there is a gap beneath the door that water can get under. Some automatic doors can create a wind tunnel effect and draw wet air in from outside when they open.

Matting

Often seen as the only important part of the entrance system, matting is nevertheless often poorly designed.

To effectively remove moisture from people's footwear, entrance matting needs to be long enough and made of an appropriate material. Many entrance mats are designed primarily to take dirt off people's shoes to protect the floor inside the building from being scratched, rather than to remove moisture.

In order to remove enough moisture from people's footwear to reduce the risk of slips, the mat will need to be made of an absorbent material and will need to be long enough for people to get several footsteps on the mat with each foot.

A minimum of 3 meters of matting is recommended to remove moisture from footwear but research has shown that up to 7 meters of matting may be needed to completely dry shoes, depending on the entrance design and the type of mat.

Some buildings will be too small to accommodate mats of the necessary size, so other control measures need to be considered.

If entrance mats are too small or can be easily bypassed, pedestrians may not take enough steps on the mat for them to dry their footwear effectively. Install matting across the full width of the entrance foyer.

Avoid having strips of smooth slippery flooring between the mat and the entrance.

Internal flooring

As a secondary line of defense, if practicable, install floor surfaces that remain slip resistant when wet beyond the entrance mat, perhaps for the next few meters.

What other control measures could reduce risk?

Some contaminants can be more problematic than others. For example, snow is likely to be trafficked much further into the building than rainwater and so additional measures may be required to deal with these conditions. Some contaminants associated with manufacturing processes, such as oil or grease can be particularly problematic, and you may wish to consider preventing access to those with oily or greasy footwear.

Wet clothing and umbrellas can also spread contamination around your building. Placing coat racks and umbrella stands at the entrance may help encourage people to leave their wet coats and umbrellas at the door. Alternatively, umbrella bagging systems are available; these can be installed at entrances to help contain water shed from umbrellas.

Features such as single steps, ramps or slopes can present a significant trip hazard if they are poorly designed. Consider the risks that these and other features may pose and consider the need for improvements. Even small changes in level can present a trip hazard, especially if they are not easy to see (see Risk Essentials – Managing Trips).

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