

Honeywell

RISK CHECKLIST FOR WORKER FOOT PROTECTION



Every year more than 2.7 million people die and 374 million people experience non-fatal work-related injuries and illnesses. This translates into an annual productivity loss of \$2.99 trillion, which is equivalent to 3.94% of the global GDP. The biggest cause of occupational injuries are slips, trips and falls. At the same time, musculoskeletal diseases are a major cause of lost work time. More than 22,000 workers retire early each year in Germany due to musculoskeletal disorders (MSDs). Safety footwear can have a major positive impact on both these causes of injury and productivity loss.

Here is a list of top ten risk factors to be aware of in terms of workers' feet:

SLIPPING

It only takes a moment for a loss of traction under foot to turn into a serious injury. Simple and practical steps - like the implementation of good housekeeping standards - can help, but this will not eliminate the risk completely. Slip resistant safety shoes maintain a high level of traction between the shoe and the floor by creating pathways for liquid to be squeezed out from under the shoe.





☑ BEING STRUCK BY HEAVY OBJECTS

Feet are vulnerable to being struck by falling objects, especially when work is happening at multiple levels. Workers in construction sites, industrial facilities and warehouses can all be exposed to falling objects from those performing tasks above them. Protective toecaps are the counter to these risks. Toecaps may be formed out of composite materials or steel. ISO 20345 requires safety shoes to have an impact resistance of 200 J and a compression resistance of 15 kN. Where the risks warrant it, additional metatarsal protection can be specified for safety shoes. This feature must also provide a resistance of 200 J in order to meet ISO 20345.

☑ SHARP OBJECTS

Construction sites and industrial facilities make use of heavy-duty nails, bolts, iron bars and other sharp materials. While good housekeeping minimises the potential for standing on something sharp, it does not eliminate the risk completely. Midsole penetration protection creates a barrier between the foot and sharp objects on the ground. ISO 20345 specifies a resistance to a penetration force of at least 1,100 N where applicable.

☑ CHEMICAL SPLASHES

Workers are vulnerable to chemical burns if splashed by a hazardous chemical. It is important to know the characteristics of all chemicals used on site. All the properties and hazards associated with a chemical are available on the MSDS issued by suppliers. Safety shoes that are resistant to chemical attack protect workers' feet and allow them enough time to safely remove contaminated clothing and footwear.

☑ WATER SATURATION

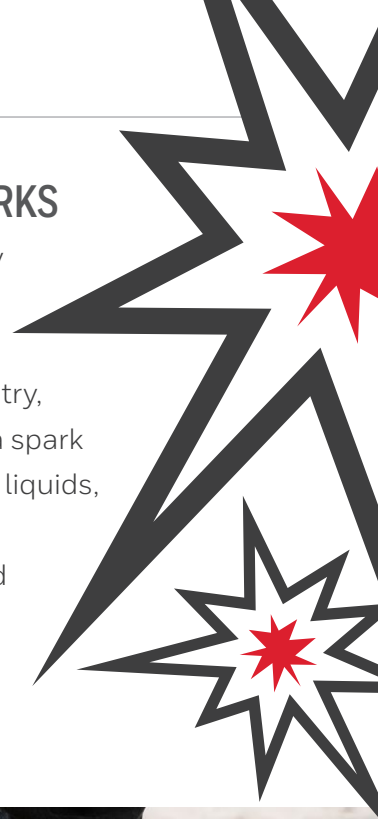
The wet climate of Europe means that workers will often be exposed to rainfall and puddles of water. Water laden shoes are unsafe for two reasons. Firstly, they expose workers to conditions which could lead to illness. Secondly, they make shoes heavy and cumbersome to wear. This results in a higher risk of trips and falls. Water resistant safety footwear resolves these issues.

☑ ELECTRICAL SHOCK

Working on high voltage systems and live electricity obviously carries the risk of causing electric shocks. Following safe work practices can reduce this risk. However, electric current always tries to find a path to earth. As a final safety measure, isolating safety shoes prevents current from passing through a worker's body and into the ground.

☑ STATIC ELECTRICITY AND SPARKS

In the electronics industry, static electricity discharge causes damage to electronic components leading to quality failures and revenue losses. In the chemicals industry, static electricity can be life threatening. If a spark is generated while working with flammable liquids, it could result in an explosion with severe consequences, including serious injury and death. Safety footwear with electrostatic discharge properties protects workers from the risks of sparking.



☑ EXCESSIVE PRESSURE ON THE FOOT

Long periods of standing and walking long distances puts pressure on the heel due to the excessive load. This leads to discomfort and pain. Cushioning and shock absorption in safety shoes is designed to minimise this pressure and prevent long term MSDs as a result of continuous pressure on the feet.



☑ UNNATURAL WALKING STYLE

Shoes that result in an unnatural walking style give rise to problems in the feet and in joints such as knees and hips. These risks are not obvious and do not give rise to short term complaints. Nevertheless, they can result in MSDs that impact on productivity over time and may even result in an early exit from the workforce.

☑ IMPROPER SHOE SIZING

The consequences of improper shoe sizing also seldom result in short term problems, but there is the potential for long term damage. Small shoes cause bunions, while large shoes are cumbersome and therefore increase the risk of a fall. Size may also contribute to an unnatural walking style, giving rise to MSDs over a person's working career.

Occupational injuries and illnesses impact on the lives of workers, as well as the productivity of organisations. Slips, trips and falls, along with MSDs, are the primary culprits and biggest influences. Being aware of the risks associated with workers' feet can help to identify the major contributors on each site. The right safety footwear solution is an important step to reducing these risks and keeping workers safer and healthier.



For more information about the risks to workers' feet and advice on how to overcome them, download our Safety Footwear Risk Report [here](#).

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HIS_Shoes_Ultimate_Risk_Listicle | 05/19
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