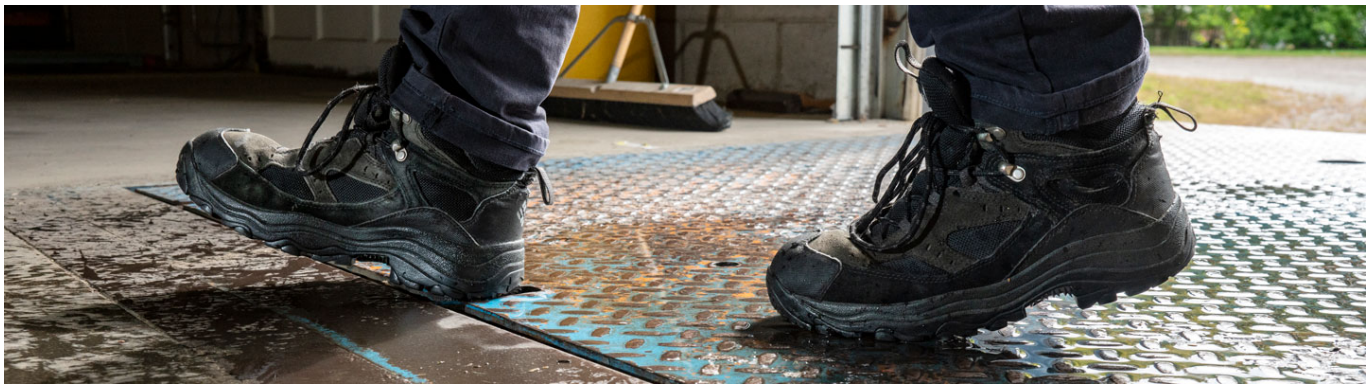

Safety

Safety Shoes: Are You Using the Best PPE Footwear in Your Facility?

Roland Jones | Sep 10, 2020

Employee wellbeing is one of the most important considerations in any workplace, yet safety footwear may not always receive the same attention as other forms of personal protective equipment. Here's what you need to know about workplace hazards and safety footwear.

In the past, one work boot may have looked much like another, but in manufacturing environments, safety footwear styles and technologies have changed over recent years as employers have sought to protect their workers from such hazards as electric shocks, heavy falling objects or slippery surfaces.

Commonly used forms of PPE footwear today include shoes with impact-resistant toes, or footwear with puncture or heat-resistant soles. Other types of safety shoes protect workers on or around wet or slippery surfaces, which may lead to a dangerous fall, while others are designed to protect workers in jobs that require a great deal of standing or excessive walking, which can lead to chronic leg or back pain and could even impede a worker's ability to do his or her job.

> **Matching the best safety footwear to the job at hand is not as straightforward as you might think. Each work environment is different, and a worker may encounter many different hazards on a worksite during a day.**

OSHA Standards for Foot Protection

The Occupational Safety and Health Administration (OSHA) takes foot protection seriously. OSHA's general requirements (***CFR 1910.136***) on workplace foot protection require that workers use protective footwear when working in areas "where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, or when the use of protective footwear will protect the affected employee from an electrical hazard." The protective footwear used must meet ***the criteria set by the American National Standards Institute***.

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Why You Need Electrical Safety Shoes

From electrical hazards to static buildups, electricity poses a host of risks in the workplace. To reduce the possibility of an electrical accident, it's worth learning about the features of electrical safety shoes.

Some are designed to be electrically conductive to avoid the buildup of static electricity in potentially explosive atmospheres, while others are nonconductive to protect employees from workplace electrical hazards, especially if those employees are working on electrical equipment.

Nonconductive electrical safety shoes are worn by workers who are at risk to an electrical hazard, as they prevent the wearer's feet from completing an electrical circuit to the ground.

These shoes "can protect against open circuits of up to 600 volts in dry conditions and should be used in conjunction with other insulating equipment and additional precautions to reduce the risk of an employee becoming a path for hazardous electrical energy," ***according to OSHA***.

Conductive electrical safety shoes prevent the buildup of static electricity on the human body and therefore lower the risk of an explosion in areas where combustible material is stored. A spark of static electricity from clothing is sometimes enough to start an explosion.

Conductive shoes must be removed when the task requiring their use is completed, notes OSHA, adding that employees exposed to electrical hazards "must never wear conductive shoes."

Failure to comply with OSHA's regulations may result in warnings, sanctions and fines, which can cost your company thousands of dollars. Earlier this year, ***OSHA increased the penalties it charges*** for workplace safety and health violations, with the maximum fine for a willful violation rising to $134,937 from $132,598.

The Importance of Wearing Safety Shoes

Workplace foot injuries are no small matter. According to Occupational Health & Safety magazine, the U.S. workforce ***suffers around 100,000 occupational foot injuries annually***, averaging 10 days of missed work for each injury. When you add to this the potential cost of OSHA fines or workers' compensation claims, and the loss of workplace productivity due to an injury, ignoring foot protection can be a costly mistake for a company.

Matching the best safety footwear to the job at hand is not as straightforward as you might think. Each work environment is different, and a worker may encounter many different hazards on a worksite during a day.

When choosing safety shoes for your employees, it's worth thinking through the various dangers your employees may face as they do their required tasks. You may also ask yourself what the most common injuries in your workplace are: Do most of the injuries happen because of slips and falls? If so, consider footwear with a strong grip. Are employees standing for long periods? If they are, shoe comfort could be

a high priority.

Read more: Flammability Limits: How to Reduce Fire Hazard Risks in Your Facility

Common Causes of Workplace Foot Injuries

Footwear manufacturers are constantly working to provide products that meet the needs of specific work conditions or industries. Generally speaking, safety footwear is designed to protect workers from the following common workplace hazards:

- Injuries from falling and flying objects
- Slips, trips and falls
- Punctures and cuts due to sharp objects
- Burns
- Electrical injuries
- Fatigue and musculoskeletal conditions
- Extreme temperatures

Today's safety shoes are durable and built with innovative technology to make them lighter and more comfortable, and they are designed to improve worker performance and reduce fatigue.

Different Types of PPE Footwear

Safety footwear comes in a wide variety of forms, of course, offering protection for the toes, or from penetration of the sole. Boots and shoes made from rubber or plastic offer protection from oil or corrosive substances, while nonconductive shoes protect you from live electrical circuits.

Here's a look at some of the most common forms of safety shoes:

Safety-toed footwear: This is a common form of safety shoe that has a hard covering around the toe to keep the wearer's foot safe from crushing injuries. This footwear is commonly used in workplaces where heavy industrial equipment is used, especially when items can easily fall on a worker's foot.

Shoes with sole protection: These shoes include outsoles that are designed to protect the wearer from corrosive substances, to provide more grip on slippery surfaces, or when traction is needed in uneven, outdoor environments. A heavy-duty sole may also protect workers when they step on sharp objects or are struck by sharp objects from above.

Steel insole shoes: This footwear has a steel insert to support the foot and offer greater comfort to workers performing high-impact tasks, such as operating a forklift or driving heavy trucks. These shoes help to stabilize the foot and reduce the effect of heavy-impact work.

Foot and metatarsal guards: These shoes are protective guards—shoe-caps and metatarsal guards—worn over existing shoes to protect the tops of feet. They reduce the impact of accidents that can occur when heavy equipment falls on a worker's feet, particularly for jobs where workers lift or use heavy equipment and machines.

Shoes for electric hazards: This footwear is designed to protect those working with electricity, circuits, wiring and other tasks involving high-voltage machines and devices. The sole is insulated to help reduce the possibility of an electric shock.

Other types of foot protection for manufacturing settings may include *ice traction footwear*, *insoles*, *overboots, overshoes and spats*.

As with any other PPE, safety footwear should be regularly checked for wear and tear, including holes, cracks, worn soles and other damage that could impair its protective abilities.

What are your primary considerations when purchasing safety footwear? What best practices have you established? Share your thoughts in the comments below.