

**TDI**

**Safety @ Work**  
Division of Workers' Compensation

# Foot and Leg Protection



**Workplace  
Program**



## DISCLAIMER

This Workplace Program is a guide to help employers comply with the Occupational Safety and Health Administration's (OSHA) requirements for foot and leg protection in [29 Code of Federal Regulations \(CFR\) 1910.136](#). It is not meant to supersede OSHA requirements. Employers should review the OSHA standard for each specific worksite and customize a foot and leg protection safety program accordingly.

This Foot and Leg Protection Workplace Program is provided as a public service by the Texas Department of Insurance, Division of Workers' Compensation (DWC)-Workplace Safety and the Texas Occupational Safety and Health Consultation (OSHCON) Program. The information in this document was produced by staff subject specialists, government entities, and other authoritative sources. Information contained in this publication is considered accurate at the time of publication. For free DWC workplace safety [publications](#) or [streaming videos](#) on this and other topics, visit [www.txsafetyatwork.com](http://www.txsafetyatwork.com), call 1-800-252- 7031, option 2, or email [resourcecenter@tdi.texas.gov](mailto:resourcecenter@tdi.texas.gov).

# INTRODUCTION

STEEL TOED  
SHOES  
— OR —  
TOE GUARDS  
REQUIRED



Safety footwear and leg protection worn in the workplace are designed to protect the feet and legs from physical hazards such as:

- falling or rolling objects;
- piercing or crushing objects;
- heat and cold;
- wet and slippery surfaces;
- exposure to corrosive chemicals; and
- electrical hazards.

OSHA's protective legwear and footwear regulations incorporate other federal standards. All protective footwear must meet or provide equivalent protection to the American Society for Testing and Materials (ASTM) [Test Methods for Foot Protection, F2412](#), and [Specification for Performance](#)

[Requirements for Protective Footwear, F 2413](#).<sup>1</sup> All ASTM-approved footwear must feature a protective toe and offer impact and compression protection. However, different footwear and legwear protect in different ways and should be purchased based on specific hazards at a worksite. Always check the product's label or consult the manufacturer to make sure the footwear and legwear protect the user from specific workplace hazards.

Employers are encouraged to develop a foot and legwear protection safety program; train employees on foot and leg safety; and share information on the importance of protective footwear and legwear as part of their personal protective equipment (PPE). This publication is designed to help employers understand and fulfill these obligations under the law.

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# FOOT & LEG PROTECTION

## Types of Work-Related Foot and Leg Injuries

There are three main categories of work-related foot and leg injuries. The first category includes injuries such as punctures, crushing, sprains, and cuts. The second category includes exposure to harmful substances or

environments, and the third category includes injuries resulting from falls, slips, and trips. Falls, slips, and trips do not always result in a foot or leg injury but lack of attention to safety plays an important role in their occurrence.

## Examples of Workplace Foot and Leg Injuries\*

Injuries	Common Causes
Crushed or broken feet or legs; amputations of toes, feet, or legs	Feet or legs trapped between objects or caught in a crack; falls of heavy objects; moving vehicles such as lift trucks, bulldozers, etc.; conveyor belts that can draw the feet or legs between the belt and roller
Punctures of the sole	Loose nails; sharp metal; glass objects
Cuts on legs or feet; severed feet or toes	Chainsaws; rotary mowers; unguarded machinery
Burns	Molten metal splashes; chemical splashes; contact with fire; flammable or explosive atmospheres
Electric shock	Static electricity; contact with sources of electricity
Sprained or twisted ankles; fractured or broken bones due to slips, trips, or falls	Slippery floors; littered walkways; incorrect footwear; poor lighting

\* Additional hazards for foot and leg injuries exist in outdoor jobs such as logging and linework, which may involve freezing temperatures or wetness in low temperatures causing injuries such as frostbite and trench foot.

## Who Must Wear Foot and Leg Protection?

Any employee engaged in tasks that expose them to foot or leg injuries should wear safety footwear and leg protection. Typically, many construction and industry workers are always wearing some form of foot and leg protection, whether it is shoes, boots, kneepads, or another piece of protective equipment. However, workers are required to wear foot and leg protection when working:

- near electrical hazards;
- on or around hot, wet, or slippery surfaces;
- near molten metal that might splash on the feet or legs;
- with sharp objects such as nails or spikes that can pierce the soles or uppers of ordinary shoes; or
- with heavy objects such as barrels or tools that can roll onto or fall on the employee's feet.

# Types of Foot and Leg Protection

There are many types of foot and leg protection including:



Leg Guards

- **Leggings (Leg Guards)**

Leggings guard the lower legs and feet from heat-related hazards like molten metal or welding sparks. They cover the knee, shin, and top of the foot from impact or abrasions. Safety snaps allow leggings to be removed quickly.



Metatarsal Guards

- **Metatarsal Guards**

Metatarsal guards protect the top of the foot and the instep from impact and compression. These guards are made from aluminum, steel, fiber, or plastic, and can be strapped to the outside of shoes.



Toe Guards

- **Toe Guards**

Toe guards fit over the tip of regular shoes to protect the toes from impact and compression hazards. They are made of steel, aluminum, or plastic.

- **Combination Foot and Shin Guards**

Combination foot and shin guards provide total coverage for the lower legs and feet. They may be used in combination with toe guards when greater protection is needed.



Combination Foot & Shin Guards

- **Chaps**

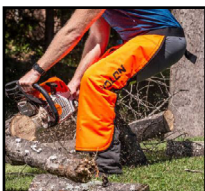
Chaps protect upper and lower legs and are usually hazard or task-specific such as:

- **Chainsaw Chaps**

Chainsaw chaps are made of multiple layers of cut-resistant fabric designed to jam the chainsaw chain and stop the cutting action before it reaches the skin.

- **Welding Chaps**

Welding chaps are typically made of leather and provide heat and burn protection from sparks and slag.



Chaps



Waders

- **Waders**

Waders provide water-proof protection for the feet, legs, and the lower torso.

- **Safety Shoes**

Safety shoes are all-purpose shoes with impact-resistant toes (usually

made of steel or composites) and heat-resistant soles. The metal insoles of some safety shoes protect against puncture wounds. There are also a variety of special-purpose safety shoes including:

- **Static Dissipative (SD) & Conductive (CD) Shoes**

SD and CD safety shoes protect against the buildup of static electricity between a person in motion and the surfaces and environment around them. These shoes conduct the charge through the shoes to the ground.

The primary difference between SD and CD shoes is that SD shoes have slightly higher resistance, which causes them to dissipate static electricity a little slower than CD shoes.<sup>4</sup> These shoes are commonly used in grain elevators and when manufacturing electronic components, flammable liquids, explosives, or plastics. They reduce the risk of static electricity buildup on the body that could produce a spark and cause an explosion or fire. Foot powder should not be used with protective conductive footwear because it provides insulation, reducing the conductive ability of the shoes. Also, silk, wool, and nylon socks can produce static electricity and should not be worn with conductive footwear. Conductive shoes must be removed when the task requiring their use is completed. **Employees exposed to electrical hazards must never wear conductive shoes.**

- **Electrical Hazard (EH) Non-Conductive Shoes**

EH-rated shoes are electrical insulators



and prevent the wearers' feet from completing an electrical circuit to the ground. They can also prevent electric shock from stepping on a live conductor. These shoes can protect against open circuits of up to 600 volts in dry conditions.<sup>5</sup> They should be used with other insulating equipment and additional precautions to reduce the risk of an employee becoming a path for hazardous electrical energy. The insulating protection of EH shoes may be compromised if the shoes become wet, the soles are worn, metal particles become embedded in the sole or heel, or employees touch conductive grounded items. **Nonconductive footwear must not be used in explosive or hazardous locations.**

- **Dielectric Overshoes**

Dielectric overshoes are ideal for workers who have to continually enter and exit high voltage areas. These overshoes allow staff to keep their normal safety footwear on and slip-on additional protection from high voltage when

needed. The soles of these shoes provide a barrier to protect personnel from open electrical sources up to 600 volts.<sup>6</sup> Protection is provided against the touch or stepping on an energized conductor. These are typically used for working in the area of live power where the current can jump large distances, especially in wet conditions. Dielectric overshoes are typically used when performing equipment grounding near power lines.

- **Foundry Shoes**

In addition to insulating the feet from the extreme heat of molten metal, foundry shoes keep hot metal from lodging in shoe eyelets, tongues, or other shoe parts. These snug-fitting shoes have leather or rubber soles and rubber heels. All foundry shoes must have built-in safety toes.

- **Thermal-Insulated Shoes**

Thermal-insulated shoes are constructed to resist high heat and cold situations. They are intended for tough outdoor environments.

- **Waterproof Shoes**

These shoes are constructed to keep the feet dry and comfortable in wet conditions.

- **Chemical-Resistant Shoes**

Chemical-resistant shoes are constructed of various materials to protect against chemical and biological hazards. Chemical-resistant slip-on overshoes or booties can also be used for chemical or biological protection.

- **Puncture-Resistant Shoes**

These shoes are designed to protect the midsole of the foot from sharp objects that can pierce or penetrate the sole of the shoe.

- **Slip-Resistant Shoes**

These shoes provide slip-resistant tread for wet, oily, or greasy floors. Shoe chains, cleats, or spikes are also available to fit over existing boots to prevent falls on ice, snow, or other slick surfaces. Never wear ice or snow cleats when walking on hard surfaces other than snow or ice.

## Selecting Foot and Leg Protection

Each industry requires safety shoes designed to confront specific dangers. Shoe manufacturers can guide workers to the appropriate pair of shoes for their jobs. The more dangerous the position, the more likely the shoe will be created for a narrower range of challenges. Outfitting employees with appropriate footwear reduces injuries. Protecting employees' feet, ankles, and knees with good industrial footwear cuts lost work hours, improves productivity, and heightens morale.

The following chart provides general guidance for the proper selection of foot and leg protection:





Protection	Source(s)	Workplace Environments
Steel-toed safety shoes, boots, and toe caps	Impact, compression, cuts, abrasions	Construction, demolition, renovation, plumbing, building maintenance, trenching, utility work, grass cutting, materials handling
Metatarsal footwear	Severe impact or compression to the top of the foot	Jack-hammering, pavement breaking, heavy pipes, steel or iron work, skid trucks
Heat-resistant boots, leggings, and chaps	Molten metal, super-heated fluids	Foundry work, welding operations
Chemical-resistant footwear and legwear	Splash hazard or direct contact; work with certain chemicals	Acid and chemical handling, degreasing, plating, and spill response
Static Dissipative (SD)	Use with static dissipative flooring.	Work on electronics, computer components, solvent-based paints, explosives, and plastics
Conductive footwear (CD)	Work near or in explosive or hazardous atmospheres. DO NOT use when exposed to electrical hazards.	Explosives manufacturing, grain milling, spray painting, or similar work with highly flammable materials
Electrical hazard (EH) footwear	Work on or near exposed energized electrical wiring or components. DO NOT use in areas that have potential flammable or explosive atmospheres.	Building maintenance, utility work; construction; wiring; work on or near communications, computer, or similar equipment; and arc or resistance welding
Leggings	Impact, compression, cuts, abrasions	Logging operations, tree work, chainsaw work
Waders	Wet environments	Wet Environments such as lakes, pools, pits, and fishing
Chaps	Impact, compression, cuts, abrasions	Tree Service, logging operations, chainsaw work

In addition, good footwear should have the following qualities:

- The inner side of the shoe should be straight from the heel to the end of the big toe.
- The shoe should grip the heel firmly.
- The forepart should allow freedom of movement for the toes.
- The shoe must have a fastening across the instep to prevent the foot from slipping when walking.

The heel should be no more than about 2.5 inches high, and not be lower than the ball of the foot.

People buying footwear for work:

- Do not expect tight footwear to stretch with wear.
- Measure both feet when buying shoes. Feet normally differ in size. Buy shoes to fit the bigger foot.
- Buy shoes late in the afternoon when feet are likely to be swollen to their maximum size.
- Ask a doctor's advice if properly fitting shoes are not available.
- Consider using shock-absorbing insoles if the job requires walking or standing on hard floors.
- A steel toe cap should cover the length of the toes from tips to beyond the natural bend of the foot. A soft pad covering the edge of the toecap increases comfort. If the toecap cuts into the foot, either the size or style of the footwear is incorrect.
- Soles come in a variety of thicknesses and materials. They need to be chosen according to the hazards and types of flooring in the workplace



- Uppers of protective footwear come in a variety of materials. Consider the hazards and individual characteristics of the workers' feet when making a selection.
- A steel midsole that protects the foot against puncture by sharp objects should be flexible enough to allow the foot to bend.
- No one type of non-slip footwear can prevent the wearer from slipping on every surface type.

Working outdoors in cold weather poses special requirements that can be resolved by:

- Insulating the legs by wearing thermal undergarments.
- Wearing insulating overshoes over safety footwear.
- Wearing insulating muffs around the ankles and over the top of the footwear.

All footwear should provide comfort without compromising protection. Remember that tight socks or stockings can cramp the toes as much as poorly-fitted shoes. Wrinkled socks, or socks that are too large or too small, can cause blisters. White woolen or cotton socks may be recommended since colored socks can cause skin allergies in some people.

## Storing and Caring for Protective Footwear and Legwear

As with all protective equipment, safety footwear and legwear should get inspected before each use. Shoes and leggings should be checked for wear and tear often. This includes looking for cracks or holes, separation of materials, broken buckles, or frayed laces. Check the soles of shoes for pieces of metal or other em-

bedded items that could present electrical or tripping hazards. Employees should follow the manufacturers' recommendations for cleaning, maintaining, and storing protective legwear and footwear. Remove damaged or defective legwear and footwear from service immediately and discard them.

# Preventing Foot and Leg Injuries

There is no workplace where a worker is immune to foot and leg injuries. The first step in developing a plan to reduce foot and leg problems is to identify the hazards at the workplace and assess how foot and leg injuries can be prevented. This may include not only selecting and requiring proper footwear and legwear but also looking for ways to improve job tasks and workplace design. It should also include training employees to recognize hazards and take steps to care for their feet and legs.



## Foot Care

Feet are subject to a variety of skin and toenail disorders. Workers can avoid many of them by following simple foot care tips:

- Wash feet daily with soap and water. Rinse thoroughly and dry with a clean towel, especially between the toes.
- Trim toenails straight across and not too short. Do not cut the corners of the nail since it can increase the chances of ingrown toenails.
- Wear clean socks or stockings and change them daily.

Some feet sweat more than others and are more prone to athlete's foot. These simple guidelines may help:

- Select shoes made of leather or canvas, not synthetic materials.

- Keep several pairs of shoes on hand and rotate shoes daily to allow them to air out.
- For some workers, non-colored, woolen, or cotton socks may be recommended since dyes may cause or aggravate skin allergies.
- Foot powder can prevent athlete's foot, but it can act as an insulator. It should never be used by employees who work with electricity or whose jobs require the dissipation of static electricity.
- If problems persist, or in cases of persisting ingrown toenails, calluses, corns, fungal infections, and more serious conditions such as flat feet and arthritis, see a doctor or a health care specialist.

## Get Moving to Prevent Injury

Common foot and leg problems occur both on and off the job. Still, there is no doubt that

some work-related factors can lead to foot and leg health issues, especially when jobs require long periods of standing. Standing for hours, day after day, not only tires the worker's feet but can also cause permanent damage. Continuous standing can cause the joints or bones of the feet to become misaligned resulting in flat feet and other painful injuries. It can also cause inflammation that can lead to rheumatism and arthritis.

In addition, standing requires considerable muscular effort. Yet, it is not exercise – only a strain. It does not allow for the contracting and relaxing of muscles and the circulation

of blood flow that helps to keep feet and legs healthy. That is why it is important to move often.

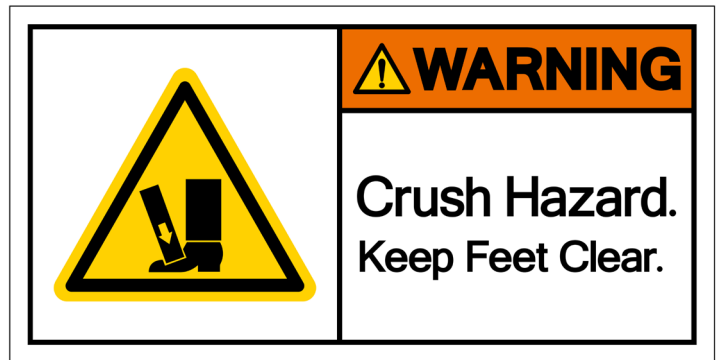
Some actions that can help improve leg and foot health at almost any job site are to alternately contract and relax the calf muscles. This can be followed by flexing and straightening the ankles and knees. It is also important to walk whenever possible.

For more information on exercises for feet and legs while on-the-job, view the Center for Disease Control and Prevention's resource guide, [Physical Activity Breaks for the Workplace](#).

## Provide Employee Training in Foot and Leg Protection

The best way to involve workers in programs to protect their feet and legs is to provide:

- training and information on the health hazards of wearing improper legwear and footwear;
- methods for selecting proper safety shoes and leg protection; and
- simple rules of general foot and leg care.



## How Workplace Design Can Improve Foot and Leg Safety

There are a variety of steps employers can take to reduce work-related foot and leg problems. Among them are:

- **Flooring**  
The type of flooring used in the workplace is important to the comfort of feet and legs. Hard, unyielding floors like concrete are the least comfortable surfaces on which to work. Working on a hard floor can pound the heel at every step. Slippery floors are hazardous

for slips and falls and can result in sprained ankles or broken foot bones. By providing anti-fatigue and anti-slip floor mats, employers can reduce accidents and decrease foot and lower limb disorders.

- **Job Tasks**  
A goal of job design is to help employees avoid long periods in a fixed position especially standing positions or awkward postures. Good job design includes having

employees vary their job tasks so there are changes in body position and the use of different muscles. (See DWC's publication, [Ergonomics for General Industry Workplace Program](#).)

Job rotation, job enlargement, and teamwork are all ways to make work easier on the feet and legs.

- **Job Rotation**  
Job rotation moves workers from one job to another. It distributes standing among a group of workers and shortens the time each individual spends standing. However, the rotations should be designed where the worker does something completely different such as walking around or sitting at the next job.
- **Job Enlargement**  
Job enlargement includes more and different tasks in a worker's duties. If it increases the variety of body positions and motions, the worker has less chance of developing foot and lower limb disorders.
- **Teamwork**  
Teamwork gives employees more control in planning and sharing work. Each team member gets a set of various operations to complete. Teamwork allows workers to switch between tasks, thus

reducing the risk of overloading their feet and legs.

- **Rest Breaks**

Rest breaks help to reduce foot and leg problems when redesigning job tasks is impractical. Frequent short breaks are more effective than fewer long breaks.

- **Workstations**

Redesigning the job alone will not effectively reduce foot and leg problems if it is not combined with the proper workstation design.

- **Adjustable Work Surfaces**

For standing jobs, an adjustable work surface is the best choice. If the work surface is not adjustable, install a platform to raise the shorter worker or a pedestal to raise the object for a taller worker.

- **Workstations That Allow for Body Position Changes**

Workstation design should allow the worker room to change body positions. As an example, a footrail or footrest can enable the worker to shift weight from one leg to the other, reducing the stress on the lower legs and feet. Also, when possible, an employer should allow workers to sit or stand at will. Even when work can only be done while standing, provide a seat for resting purposes.



## Employers' Responsibility

OSHA requires that employers protect workers from workplace hazards that can cause injury or illness. Controlling a hazard at its source is the best way to protect workers. However, when engineering, work practices, and administrative controls are not feasible or do not provide sufficient protection, employers must provide PPE to workers and ensure its use.

On May 15, 2008, a new OSHA rule went into effect requiring employers to provide **PPE at no cost to employees** when the PPE is used to comply with OSHA standards. Specific to footwear and legwear, if employers require employees to keep non-specialty

safety-toe protective footwear or legwear at the workplace, companies must pay for it. Employers must also pay for non-standard specialty safety-toe protective footwear, such as nonskid shoes, and footwear using metatarsal protection. However, employers are not required to pay for non-specialty, safety-toe protective footwear when the employee can wear it off the workplace. There is also a payment exception when an employee has lost or intentionally damaged the PPE and it must be replaced. For more information on OSHA requirements for the employer to pay for PPE, view OSHA's webpage, [Payment for Personal Protective Equipment](#).

# APPENDIX A:

## OSHA Standards That Apply to PPE

### OSHA General Industry PPE Standards:

- [1910.132](#): General requirements and payment;
- [1910.133](#): Eye and face protection;
- [1910.134](#): Respiratory protection;
- [1910.135](#): Head protection;
- [1910.136](#): Foot protection;
- [1910.137](#): Electrical protective devices; and
- [1910.138](#): Hand protection.

### OSHA Construction PPE Standards:

- [1926.28](#): Personal protective equipment;
- [1926.95](#): Criteria for personal protective equipment;
- [1926.96](#): Occupational foot protection;
- [1926.100](#): Head protection;
- [1926.101](#): Hearing protection;
- [1926.102](#): Eye and face protection; and
- [1926.103](#): Respiratory protection.

**There are also PPE requirements in shipyards and marine terminals and many standards on specific hazards, such as:**

- [1910.1030](#): Bloodborne pathogens and
- [1910.146](#): Permit-required confined spaces.

**OSHA standards are online at [www.osha.gov](http://www.osha.gov).**

# APPENDIX B:

## ASTM Standards That Apply to Foot Protection

Protective footwear must comply with the American Society for Testing and Materials (ASTM) standard F2413-05, formerly known as the American National Standards Institute (ANSI) Z41-1999. Only after footwear is compliant with the most important ASTM F2413-05 requirements for impact and compression resistance can additional requirements be met.

The ASTM standard measures the protective strength and durability, or impact resistance, of shoes through tests in which weights of 30, 50, and 75 pounds are dropped from a set height to determine whether a shoe can withstand the force. The results determine whether a shoe model is "1/30," "1/50" or "1/75" approved. A shoe that is 1/75 approved has achieved the highest level of impact protection.

Compression testing uses the same ratings but employs a different approach. A shoe rated C/30 can withstand 1,000 pounds of pressure, a C/50 rating represents 1,750 pounds and a C/75 rating represents 2,500 pounds. For reference, shoe manufacturers and sales staff can provide the ratings, which are also available online.

The ASTM requires that compression- and impact-resistant shoes have built-in toe guards. These shoes must have I/50 and I/75 ratings, as well as reach the C/50 and C/75 threshold. Beyond compression and impact resistance, shoes required for different types of jobs will reflect their specific list of standards. For example, a shoe buyer might find an ASTM-certified product with the following designation:

- ASTM F2413-05

- MI/75, C/75, Mt75
- SR
- CS

What does this mean? The first line communicates that the shoe meets the ASTM F2413-05 standard. In the next line, the M stands for male, the I/75 stands for the impact rating and the C/75 is the compression rating. The Mt75 is a metatarsal designation of 75, protecting the wearer if up to 75 pounds is dropped on his or her feet. The SR means the shoe is slip-resistant, and the CS means it is chainsaw resistant. Refer to the following list of rating abbreviations:

- C30, C50, C75 = Compression rating
- CD = Conductive properties
- CR=Chainsaw resistant
- DI = Dielectric insulation properties
- EH = Electrical insulation properties
- ESD = Electrostatic dissipative
- F = Footwear designated for a female
- I/30, I/50, I/75 = Impact rating
- M = Footwear designated for a male
- Mt30, Mt50, Mt75 = Metatarsal rating
- PR = Puncture resistant
- SL=Slip resistant

Safety and health experts recommend employers simply require employees to wear ASTM-approved shoes, because add-on protective devices, such as protective toe caps, often fit awkwardly over street shoes. These can also be difficult to walk in for more than a few feet, and employees can forget to put them on. A safer approach is for everyone in industrial settings to wear ASTM-approved F2413-05 shoes.



## References

- <sup>1</sup> Centers for Disease Control and Prevention, NIOSH Personal Protective Equipment Information. <https://wwwn.cdc.gov/PPEInfo/Standards/Info/ANSIZ41>. Accessed June 7, 2022.
- <sup>2</sup> Daneshmandi, H., Choobineh, A. R., Ghaem, H., Alhamd, M., & Fakherpour, A. (2017). The effect of musculoskeletal problems on fatigue and productivity of office personnel: a cross-sectional study. *Journal of preventive medicine and hygiene*, 58(3), E252-E258. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5668935/>. Accessed June 7, 2022
- <sup>3</sup> Canadian Centre for Occupational Health and Safety, Foot Comfort and Safety at Work. [https://www.ccohs.ca/oshanswers/prevention/ppe/foot\\_com.html](https://www.ccohs.ca/oshanswers/prevention/ppe/foot_com.html). Accessed June 7, 2022
- <sup>4</sup> SafeShoes, What's the Difference in Protection You Get from Electrical Hazard, Conductive (CD), and the Static Dissipating (SD) Footwear and How Do They Work? <https://www.safeshoes.com/education/safeshoes/2016/02/10/electrical-hazard-vs-conductive-vs-static-dissipating/>. Accessed June 7, 2022.
- <sup>5</sup> Occupational Safety and Health Administration, Personal Protective Equipment, pg. 21. <https://www.osha.gov/sites/default/files/publications/osha3151.pdf>. Accessed June 7, 2022.
- <sup>6</sup> North Carolina State University, Personal Protective Equipment Foot and Leg Protection (Appendix C). <https://ehs.ncsu.edu/personal-protective-equipment-ppe/foot-and-leg-protection-appendix-c/>. Accessed June 7, 2022.



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