



### **Electrical Hazard Safety-Toe Shoes**

- nonconductive and will prevent the feet from completing an electrical circuit to the ground
- can protect against open circuits of up to 600 volts in dry conditions
- should be used in conjunction with other insulating equipment and precautions



Like other types of PPE, leg and foot protection must be regularly inspected, cleaned, and maintained. If the piece of PPE is in need of repair or replacement, bring it to the immediate attention of your supervisor. Never use PPE that is in disrepair or cannot perform its intended function.

### **Getting Assistance**

For additional information about leg and foot PPE or to get assistance with PPE selection, contact EH&S.

### **Chemical Resistant Shoes/Boots**

- impervious boot or bootie covering the shoe
  - commonly made of rubber, latex, or pvc
  - worn so pant leg or lab coat cover the tops and prevent chemical exposure
  - may be worn over regular shoes



### **Environmental Health & Safety**

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# Foot and Leg Protection



# In Step With Safety

### **Care and Maintenance**

The most important element in a good safety boot or shoe is how well it fits the wearer. Since proper fit is so important, select safety shoes or boots at the end of the day when the feet are a bit swollen and have both feet measured. The best fit will be the length of the longer foot and the width of the wider one. If possible, before making a selection, try to walk on the type of surface on which you work.

### **Personal Protective Equipment**

Personal protective equipment, or PPE, is designed to protect employees from serious workplace injuries or illnesses resulting from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards.

### **Hazard Assessments**

Regulations require employers conduct hazard assessments of the workplace to determine what hazards are present that require the use of PPE, provide workers with appropriate PPE, and train employees to use and maintain it in clean and reliable condition.

Protective foot equipment should be routinely considered for occupations such as, but not limited to, carpenters, electricians, machinists, plumbers and pipefitters, dry wallers, welders, grounds-keepers, shipping and receiving clerks, warehouse workers, and employees using chemicals.

### **Foot and Leg Injuries**

According to one survey, most of the workers in selected occupations who suffered foot injuries were not wearing protective footwear. Furthermore, most of their employers did not require



them to wear safety shoes.

The typical foot injury was caused by objects falling fewer than 4 feet, and the median weight was about 65 pounds. Most workers were injured performing their normal job duties at their regular worksite.

### **When to Use PPE**

A variety of protective gear is available depending upon the workplace hazards.

Used alone or in combination, foot guards, safety shoes, and leggings (e.g., leather, aluminized rayon, or other appropriate material) can help prevent injuries by protecting employees from hazards.

Employers must provide foot and leg protection if the workplace hazard assessment reveals potential dangers to the lower extremities of the body, such as:

- Heavy objects such as barrels or tools that might roll onto or fall on employees' feet
- Rolling or pinching equipment
- Sharp objects such as nails or spikes or broken glass that might pierce the soles or uppers of ordinary shoes
- Molten metal that might splash on feet or legs
- Electrical hazards
- Fire/explosion hazards
- Hot or wet surfaces
- Slippery surfaces
- Chemical hazards



### **Safety Shoes/Boots**

- must comply with the ANSI standards
- must be sturdy
- impact-resistant toes to protect against falling objects
  - puncture and heat-resistant soles that protect against hot work surfaces common in roofing, paving, and hot metal industries and stepping on sharp objects such as nails, tacks, screws, or broken glass
- metal insoles provide additional protection against puncture wounds



In cases where foot protection is needed only on an occasional or temporary basis, strap-on metatarsal and/or toe guards may be appropriate. Made of aluminum, steel, fiber, or plastic, metatarsal and toe guards are strapped to the outside of regular shoes and only protect against impact and compression hazards.

### **Electrically Conductive Safety Shoes**

- protect against the buildup of static electricity by grounding the person wearing them
  - required for locations where static electricity could produce a spark and cause an explosion or fire
- not suitable for work involving electrical hazards

