



SAFETY SHOES – A PRIMER

A startling 25% of all disability claims of the workers relate to a foot injury. In the United States, over 100,000-foot injuries occur annually in the workplace, at a staggering estimated price tag of \$1 billion. According to the Bureau of Labor Statistics, more than 60,000 foot injuries yearly result in lost work days. Surprisingly, 80% of all foot injuries are caused by an object weighing no more than 30 pounds impacting the foot. Here is a tip to help prevent foot injuries at work:

Wear shoes with steel or composite toe and puncture-resistant footwear to protect from heavy, sharp objects & shoes that incorporate an electrical hazard (EH) protective sole & heel where there is a risk of dangerous electrical currents.

How do you know the shoes are correct? OSHA requires compliance with the latest ANSI Z41.1 "American National Standard for Personal Protection-Protective Footwear. There are several types:

Steel Toe: Steel toe boots must be worn in any work location where an employee may be exposed to injury due to a falling or rolling object.

Static Dissipative: Static dissipative footwear is designed to dissipate any build-up of static electricity in an individual's body. SD shoes are used in computer, solvent-based paint & plastics manufacturing.

Conductive: Conductive shoes protect against static electrical build-up, unlike SD shoes, which regulate electrical build-up. Conductive shoes are designed for environments where there is a large accumulation of static electricity, such as computer processor plants, explosives factories, etc.

Electrical Hazard: Electrical hazard footwear is designed for employees who work around heavy-duty electrical equipment, live wires and circuits, and energized conductors. The base in EH shoes includes soles and heels that dispel electricity in case of electrical shortage or shock.

Puncture Resistant: Puncture-resistant protective footwear includes a thin steel plate built into the shoe's midsole to deflect any objects that might pierce the shoe's sole.

Most safety shoes have symbols on the outside to indicate the protection the shoe offers:

- Green Triangle indicates that it is a class 1 toe cap with a puncture-resistant sole.
- Yellow Triangle indicates that it is a class 2 toe cap with a puncture-resistant sole.
- White Square (with ohm symbol Ω) indicates electrical protection.
- Yellow Square (with SD) indicates anti-static protection.
- Red Square (with C) indicates electrically conductive.
- Fir Tree indicates protection against chain-saws.



ANSI incorporates a code to identify the portions of the standard that the footwear complies with. The identification code must be legible (printed, stamped, stitched, etc.) on one shoe of each pair.

Interestingly, it is not laceration, amputation, dislocations, and punctures of the feet that claim most victims. Slips and trips account for the highest number of work-related injuries across all industrial sectors.