PPE: Protective Footwear Options

Handout

Overview

What features make safety shoes different from regular "street" shoes? Basically, they are designed to protect the foot and toes in areas most likely to be injured. There is a safety toe that offers protection from falling objects or weight pressing on the toes. A cushion between the toe cap and the foot offers comfort and insulation. A steel sole will protect the wearer from puncture wounds. Soles are made from a variety of materials, depending on the workplace hazards to be encountered by the person wearing them.

Some safety shoes have instep protection made of aluminum, steel, or plastic to protect the top of the foot and front of the ankle. The safety shoe or boot can be insulated to protect from heat or cold. It may also be waterproof or chemical resistant. Safety shoes are also available that offer ankle protection. With all these options specifically designed to protect your feet, can you honestly say that a pair of "street" shoes will do the same job of protecting your feet?

Types of protective footwear

A few of the different types of protective footwear include:

- Standard safety shoes- — having toes that meet testing requirements found in the ANSI standard. Steel, reinforced plastic, and hard rubber are used for safety toes, depending on their intended use.
- Rubber or plastic safety boots — offer protection against oil, water, acids, corrosives, and other industrial chemicals. They are also available with features like steel-toe caps, puncture-resistant insoles, and metatarsal guard.
- Puncture-resistant soles — protect against hazards of stepping on sharp objects that can penetrate standard shoe soles.
- Shoes with metatarsal or instep guards — metal guards extend over the foot to protect the upper foot from impacts.
- Metatarsal guards and shoe covers — attached to shoes to protect from falling objects. Strap-on wooden soled sandals can be used for protection against the underfoot hazards of oils, acids, hot water, caustics, or sharp objects. Rubber spats protect feet and ankles against chemicals. Puncture-proof inserts made of steel can be slipped into shoes to protect against underfoot hazards. Strap-on cleats fastened to your shoes will provide greater traction.

- Conductive shoes — permit the static electricity that builds up in the body of the wearer to drain off harmlessly into the ground. By preventing accumulation of static electricity, most conductive shoes keep electrostatic discharge from igniting sensitive explosive mixtures. Workers in munitions facilities or refineries often wear these shoes. Do not use these shoes if you work near open electrical circuits.
- Electrical hazard shoes — offer protection against shock hazards from contact with open circuits of 600 volts or less under dry conditions. These shoes are used in areas where employees work on live or potentially live electrical circuits. The toebox is insulated from the shoe so there is no exposed metal.
- Foundry shoes — used by welders and molders in foundries or steel mills where there is a hazard from hot splashes of molten metal or flying sparks. Instead of laces, they have elastic gores to hold the top of the shoe close to the ankle. They can then be removed quickly in case hot metal or sparks get inside.

What must I do?

For your safety, it is crucial that you understand and follow your company's procedures for foot protection. If you have any questions regarding protecting your feet from injury on the job, ask
your supervisor.