

Electrical Safety

Electricity is nature's most versatile form of energy. Electrical power lights our homes, streets, offices and factories. The power of electricity can be dangerous if it's not used correctly. Electrical energy can damage property and ignite fires. It can also hurt and even kill.

Sound safety practices can help minimize electrical hazards and cut down the risk of accidents. The hazard of electricity cannot be eliminated, but it can be controlled through education and engineering. The more you understand about electrical energy the safer you'll be at work and home.

What causes electric shock?

You can get an electric shock if you touch a grounded surface and hazardous electrical equipment at the same time. The shock happens when the flow of electric current (amperage) from the electrical equipment goes through your body to the ground. How serious the injury depends on what part of your body receives the current. It also depends on how long the electric current flows. Just a small amount of amperage can hurt or be fatal.

Protecting yourself at work

- Are you aware, only trained, qualified and authorized employees are permitted to work on electrical equipment?
- Has an electrician inspected the equipment, tools, machines and lights to make sure they operate according to electrical code requirements?
- Are extension cords and appliance cords in good repair and are properly rated for the way they're intended to be used?
- Are you using 3-prong receptacles for 3-prong plugs?
- Are you protecting circuits with Ground Fault Circuit Interrupters (GFCI)?
- Are you closing electrical control panels and covering receptacle boxes?
- Do you avoid touching water, damp surfaces, ungrounded metal and bare wires if you're not protected?
- Do you avoid working in and around wet or damp conditions, equipment and electrical currents that aren't grounded, and wires that aren't insulated?
- Do you use equipment and tools the way they are designed to be used?
- Do you report immediately any damage or defective equipment, power hand tools or machinery?
- Are you looking for posted signs that identify electrical hazards?
- Are you following lockout/tag out procedures?

Wearing the right protection

- Don't wear metal jewelry that might make contact with electric current.
- Wear eye protection where required.
- Wear rubber-soled shoes or boots on damp or wet surfaces.
- Wear safety-approved rubber and leather gloves when you work with electricity

Hazard observation checklist

- Check the surrounding area for spills, dampness or water.
- Check connections and ground wires to be tight and free from breaks.
- Check circuits and wiring are in good repair and not overloaded.
- Check insulation for worn spots or breaks that could cause a shock.
- Check the condition of cords and extension cords.
- Check and maintain equipment to make sure it's working right and free of defects or damage.
- Check equipment belts and gears to detect excess tension or binding that can cause a power overload.
- Check that personal protective hand and foot protectors are kept in good repair and readily available.
- Immediately report any hazards, damage and defective equipment, tools and machinery to a supervisor or manager.

Electrical Emergencies

Outdoor (high voltage) electricity

- Contact the police and emergency medical services.
- Notify your supervisor, or follow the emergency instructions spelled out in your company policy.
- Do NOT touch the person.
- Do NOT try to use a tool to free the person.

Indoor (low-voltage/100 Volts) electricity

- Contact emergency medical services.
- Don't touch anyone who has become grounded.
- Switch off power at the fuse or circuit-breaker box, or pull the plug.
- Call the electric company if you cannot get the power shut off.