



## Electrical Hazard

### Potential Hazard

Employee exposure to electrical hazards including electric shock, electrocutions fires, and explosions. Damaged electrical cords can lead to possible shocks or electrocutions. A flexible electrical cord may be damaged by door or window edges, by staples and fastenings, by equipment rolling over it, or simply by aging.



Possible electrocution or electric shock or contact with electrical hazards from:

- Faulty electrical equipment/machinery or wiring.
- Damaged receptacles and connectors.
- Unsafe work practices.

### Possible Solutions

Comply with OSHA Standard [1910 Subpart S-Electrical-General](#). The standard is comprehensive and includes the following sections:

- Electrical equipment shall be free from recognized hazards [[1910.303\(b\)\(1\)](#)].
- Listed or labeled equipment shall be used or installed in accordance with any instructions included in the listing or labeling [[1910.303\(b\)\(2\)](#)].
- Sufficient access and working space shall be provided and maintained around all electric equipment to permit ready and safe operation and maintenance of such equipment [[1910.303\(g\)\(1\)](#)].
- Ensure that all electrical service near sources of water is properly grounded [[1910.304\(f\)\(5\)\(v\)](#)].
- Tag out and remove from service all damaged receptacles and portable electrical equipment [[1910.334\(a\)\(2\)\(ii\)](#)].
- Repair all damaged receptacles and portable electrical equipment before placing them back into service [[1910.334\(a\)\(2\)\(ii\)](#)].
- Ensure that employees are trained not to plug or unplug energized equipment when their hands are wet [[1910.334\(a\)\(5\)\(i\)](#)].
- Use safeguards for personnel protection and electrical protective equipment [[1910.335](#)].
- Select and use appropriate work practices [[1910.333](#)].
- Follow requirements for Hazardous Classified Locations [[1910.307](#)].

Employers should use [ground-fault circuit interrupters \(GFCIs\)](#) on all 120-volt, single-phase, and 15- and 20-ampere receptacles.

- Wear and tear on electrical equipment or tools can result in insulation breaks, short-circuits and exposed wires. If there is no ground-fault protection, these can cause a [ground-fault](#) that sends current through the worker's body, resulting in electrical burns, explosions, fire, or death.
- The ground-fault circuit interrupter, or GFCI, is a fast-acting circuit breaker designed to shut off electric power in the event of a ground-fault and prevent injury to the worker.



Receptacle Type (GFCI)

#### Additional Information:

- [Electrical](#), Safety and Health Topics Page.
- [1910.305](#), Wiring methods, components, and equipment for general use.
- [1910.333](#), Selection and use of work practices.
- [1910.335](#), Safeguards for personnel protection.
- [Preventing Fatalities of Workers Who Contact Electrical Energy](#) NIOSH Alert, (1986).
- [Prevention of Electrocutions in Fast Food Restaurants](#) NIOSH Alert (1984).
- [Electrical Safety-Related Work Practices--Inspection Procedures and Interpretation Guidelines](#). (1991, July 1).
- [Preventing Electrocutions Due to Damaged Receptacles and Connectors](#): NIOSH Alert: October 1986, Pub. No. 867-100.