



Arc Welding and Electrical Safety

Arc welding is safe if the unit is properly inspected and used. You can receive a shock, however, from the primary (input) voltage if you touch a lead or other electrically “hot” component inside the welder while touching the welder case or grounded metal.

Marc’s Story

Marc was using an arc welder to install metal subflooring on a balcony at a construction site. He touched exposed wires on the welding cables and was electrocuted. Investigators found that earlier repairs to the welding cables had been done wrong, leaving them frayed and exposed.

- ✂ What caused this incident?
- ✂ How could this have been prevented?
- ✂ Have you ever been injured while welding, or do you know someone who has? If so, what happened?

Remember This

Before starting:

- Inspect the arc welder. Look for frayed welding leads and damage to the cable insulation and welder.

- Read **all** warning labels and instruction manuals.
- Ground the welder case so that if a problem develops inside it, a fuse will blow and disconnect the power.
- Insulate your body from the metal you are welding.

While working:

- **Do not** rest your body, arms, or legs on the metal being welded, especially if your clothing is wet or your skin is exposed.
- Use mats of plywood, rubber, or some other dry insulation to stand or lie on.
- **Do not** touch the electrode or metal parts of the electrode holder with bare skin or wet clothing.
- Wear dry gloves in good condition when welding.
- Avoid welding in wet or damp areas, to prevent electrical shock.
- **Always** wear long sleeves and appropriate protective clothing, eye protection, gloves, and footwear to protect skin from burns due to ultraviolet light, sparks, and molten metal.

How can we stay safe today?

What will we do at the worksite to prevent injuries from electrical hazards while arc welding?

OSHA Standard: 1926.351





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- ✓ Wear dry gloves in good condition, eye protection, long sleeves, and footwear when welding.

GET INFORMATION

CDC/NIOSH INFO: 1-800-CDC-INFO (1-800-232-4636) | TTY: 1-800-232-6348 | [cdc.gov/info](https://www.cdc.gov/info) | [cdc.gov/niosh](https://www.cdc.gov/niosh)
CPWR: Contact 301-578-8500 | cpwr-r2p@cpwr.com | www.cpwr.com/toolbox-talks
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