

# Welding Safely Infographic





## Safety Hazards to Avoid in the Welding Workplace

Safety is important to our respective self-preparation in any workplace and occupation. Following proper safety procedures and techniques, in addition to being aware of your surroundings, can help cut down on welding injuries. Below is a list of some of the most prevalent dangers welders face every day, along with some tips for minimizing potential injuries.

### Electric Shocks

Electric shock is experienced when you make contact with metal that has an electrical current running through it. Electric shock can lead to severe injury or death from the shock itself or subsequent reaction caused by the shock.

It is paramount that you exercise extreme caution when working with electrical components, as a shock of 50 volts or more can be fatal. Most welding equipment has significant voltage, even while idle. Avoid attempting to fix welding equipment unless you are a trained professional. Common sense and paying attention to detail go a long way toward the prevention of electric shock.

### Fumes and Gas

Welding fumes contain harmful complex metal oxide compounds from a variety of sources. It's important to utilize sufficient ventilation to minimize your exposure to substances in the fumes. Employers typically provide a ventilation system, such as a fan, an exhaust system or a hood, to clear hazardous fumes from the workspace.

You should wear an approved respirator in situations where you may be subjected to dangerous fumes. Make sure to check that your ventilation equipment is working.

### Brightness of the Arc

It doesn't take very much direct exposure to the blinding radiance of a welding arc to leave you with some temporary blindness, which is why you should always wear a helmet and eye protection. Auto-darkening helmets protect your eyes while still allowing you to be precise in your movements with the arc.

If you don't have an auto-darkening helmet, be sure to use the proper shade for the job. Avoiding direct visual contact with the welding arc is of the utmost importance, both for avoiding arc flash and being able to see and therefore weld effectively and safely.

### Fires

While working with welding arcs that may reach 10,000 degrees Fahrenheit, fires and explosions are very conceivable dangers. Inspect your workspace for flammable materials and move to a safe location prior to welding. Spatter from the welding arc can reach objects within a 35-foot radius.

Familiarize yourself with the locations of the fire alarms, extinguishers, hoses and exits in and around your workspace. Have someone spot you to keep an eye on sparks and remain in the vicinity when welding near flammable objects. Cover flammable nearby materials with a fire-resistant material if you can't move them.

### Personal Protective Equipment

Personal protective equipment (PPE) is designed to keep welders safe on the job when used correctly. Don't roll up your sleeves or pant legs when welding. Avoid using cracked or damaged PPE because broken equipment won't provide you the adequate protection you need.

Wear either leather or flame-resistant treated cotton to protect your body when welding. You should always wear a helmet when welding. Heavy, flame-retardant gloves should also be worn to protect your hands. Ocular protection with side shields is also recommended when you're wearing a helmet. Earplugs and earmuffs are also important to help protect your ears from noise and welding debris.

### Personal Ignorance and Carelessness

Most injuries and hazards can be avoided by being aware of your surroundings and following proper procedure. Do your homework and be aware of what you're supposed to do in a given situation. Knowledge is power, and knowing the proper welding safety processes can help save your sight and potentially your life.

Now that you're aware of these welding workplace safety hazards, you can more confidently put into practice the safety techniques you learned in your welding program.

References: <http://www.bcs.edu/tech/edu/learn/learn/welding-safety.html>, <https://www.osha-slc.gov/press-releases/2015/05/05/2015-05-05-01>, <https://www.millerwelds.com/resources/articles/best-12-tips-for-improving-welding-safety>

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