



Welding Basics

Hazards of using a welder include powerful electrical currents, a flame that can burn higher than 10,000 degrees Fahrenheit and flammable, toxic gases.

Compliance

The safety design of a welder must comply with standards set by the National Electric Manufacturers Association or Underwriters Laboratories. A welder in compliance will display a seal of approval from either organization.

Make sure the electrical system is adequate to handle the higher load needed to run the welder. Welder installation by a qualified electrician must comply with state and OSHA regulations and National Electric Code.

Requirements

- Properly grounded welder's frame
- Safety-type disconnecting switch located near the welder
- Machine protected by a properly sized fuse or circuit breaker on an independent circuit
- Well-stocked first-aid kit available
- Compressed gas cylinders
 - To safely move cylinders, tilt and roll them on bottom edges. Do not drag, drop or strike them violently. Regulators must be removed and valve protection caps must be on before cylinders are moved.
 - Before hoisting cylinders, secure them on a cradle, sling board or pallet. Do not hoist or transport by magnets or choker slings.
 - Compressed gas cylinders must be secured in an upright position at all times when hoisted or carried.
 - Store cylinders inside protected, well-ventilated, dry locations, at least 20 feet from combustible materials.
 - Ventilation
 - Each welder working with nonhazardous materials should be supplied with a ventilation system that moves at least 2,000 cubic feet of air per minute.
 - When welding materials are considered to be hazardous, an exhaust system should be located as close to the work as possible to minimize accumulation of toxic materials.

Fire Prevention

- Use metal sheets or fire-resistant curtains to help fireproof the area around an welder. Remove all combustible materials within 35 feet of welding.
- The floor should be concrete (or another fire-resistant material); if the floor has any cracks, they should be filled to prevent sparks and hot metal from entering.
- Buckets of sand and a dry chemical extinguisher should be accessible and large enough to handle an emergency.

Source: OSHA

Safety tips developed based on generally accepted safety standards believed to be reliable at the date of publication. Information is for general guidance only and should not be relied upon for legal compliance purposes.

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