Arc Welding Safety Meeting Kit

Arc welders use a powerful electric arc to make and repair plain, coated, or treated metal items. Welders can be stationary, electric powered or portable, diesel or gas powered.

Welding is a routine job on many worksites. This common task has many health and safety risks that can result in serious injury. It’s not just those involved directly with welding who are at risk. Bystanders can also be affected. It’s important for everyone to have a basic knowledge of welding hazards.

HAZARDS

- Arc welding can reach temperatures greater than 10,000 degrees F, posing a fire and explosion hazard. Do not arc weld near flammables or combustibles. Avoid welding, cutting, or hot work on used drums, barrels, or tanks where residual fumes can ignite and explode. Weld on a firebrick surface, on concrete or other fire-resistant flooring surrounded by spark curtains.
- Overloading circuits or improper installation can lead to fire, a ground fault, or equipment failure. Mount a safety disconnect switch near the user work area. Operate diesel/gas powered arc welders in well-ventilated areas to control combustion fumes. Do not add fuel to the engine while it is running or near open flame. Stop
- Eyes and skin can be burned, hearing can be damaged and an electric shock can kill you. Among the hot metal, sparks and flying chips, are compressed gases stored in high-pressure cylinders. Even the fumes and gases produced during the welding process can damage your respiratory system or cause asphyxiation.
- Welding metals may be hazardous or lead to an oxygen deficient atmosphere and are best handled in a ventilation hood exhausted to the outside. If you weld or cut metals with hazardous coatings or treatments use a supplied-air respirator or a respirator with a specialty cartridge to filter specific metal fumes.

PRECAUTION AND PROTECTION

Protective clothing includes non-flammable head protection, leather jackets and aprons, welding gloves and long-sleeved shirts with buttoned cuffs and a collar. Pant legs should cover the tops of high-cut leather safety boots, and should not have cuffs, as cuffs can collect sparks.

To protect your body from burns due to arc welding heat, ultraviolet light (UV), molten metal, and sparks, wear dark colored coveralls with long sleeves and pant legs.

The coveralls should be fire retardant, cuff-less, and pocket-less with no holes,

tears, or worn spots. A skullcap protects your head and hair. Leather gauntlet gloves and safety boots protect your hands and feet. Wear hearing protection in noisy environments and to keep sparks out of your ears.

It’s important to keep clothing dry and free of oil, grease, solvents and combustible contaminants.

Goggles or safety glasses and welding helmets/shields protect your eyes from flying sparks, chipped slag, and UV light. Welding helmets and shields should be non-reflective and free of cracks, gaps, and openings. Use the correct filter setting for the power output of the arc welder. Weld inside a screened area to protect coworkers. Portable screens, shields, and anti-flash goggles can also be used to protect visitors and coworkers.

Respirators may be needed for some welding jobs, especially when there is not sufficient ventilation to remove the welding fumes or there is oxygen deficiency. You must be properly trained in the use of the respirator. Welding workers should remain in the work area for at least 30 minutes after finishing welding to ensure there are no smoldering fires.

FINAL WORD

Many worksites carry out welding operations on a routine basis. It is taken for granted despite the fact there are many hazards associated with welding operations. Welding operations deserve to have the most strict safety protocol to protect workers and the general public from injury.