



# CLOVER SAFE

AGRICULTURE AND NATURAL RESOURCES  
ENVIRONMENTAL HEALTH AND SAFETY



#87

## BASIC GAS-WELDING SAFETY

*Clover Safe notes are intended primarily for 4-H volunteers and members nine years and older.*



Photograph Courtesy of  
Butte County 4-H Program

Data available from the Consumer Products Safety Commission indicates approximately 15,000 welding injuries requiring hospital treatment occurred during 2008. The majority of these injuries were flash burns to the eyes. ***This Clover Safe note should be used in conjunction with the gas welding safety video (E-050) available for loan from the ANR Environmental Health & Safety Library at <http://safety.ucanr.org>.***

### Pre-Use Activities

- Thoroughly review and understand information provided in the gas-welding regulator and hand torch equipment brochures with particular attention given to descriptions of safety procedures.
- Before using, always inspect the gas cylinders, hoses, regulator, and hand torch for damage or disrepair and assure all hoses are connected properly.
- If the gas cylinders, hoses, regulator, or hand torch fails the pre-use inspection, notify your group leader, parent, or guardian and remove the welding equipment from service.

### Operating Precautions

- Always wear a welding hood and gloves and appropriate protective clothing when using gas-welding equipment. Eye protection requires at least a No. 5 lens shade for gas welding.
- Gas cylinders shall always be securely fastened to a wall, dolly, or welding cart.
- Assure that the regulator and Compressed Gas Association fitting match the type of gas and cylinder being used.
- Prevent potential explosive or flammable conditions by never allowing oxygen to come in contact with oil, grease, or other flammable materials.
- When opening gas cylinder valves, always stand to one side and away from the regulator.
- Always crack (i.e., open slightly and close immediately) the cylinder valve before connecting a regulator.
- Acetylene or other fuel-gas cylinders shall always be used in an upright position.
- Always use a friction lighter to light a hand torch. Never use matches or a lighter.
- Begin gas-welding tasks by opening the acetylene valve on the hand torch and lighting the gas. Then open the hand torch oxygen valve and adjust the flame.
- Always conduct gas welding in well ventilated areas. Avoid breathing welding fumes.
- When welding operations are suspended for a substantial period of time, such as lunch or overnight, gas cylinders shall be turned off.
- At the completion of gas welding, close the hand torch acetylene valve first and oxygen valve second. Next close the acetylene cylinder valve followed by the oxygen cylinder valve. Release pressure by opening both hand torch valves and turn off the regulator adjusting handle. Finally, close both hand torch valves.
- If you suffer an injury while gas welding, tell your group leader, parent, or guardian. Seek medical attention if the injury is serious.