

10 - Respiratory Protection: Safety Training

EH&S – MGA

Goals: This safety session should teach you to:

- A. Understand when to use the different types of respirators.
- B. Understand how to fit, inspect, and maintain respirators.

OSHA Regulations: 29 CFR 1910.132, 134

1. Air That's Contaminated or Lacks Oxygen Can Be Very Harmful to Health

- A. Inhaling chemical vapors, gases, or fumes and dust can irritate and even seriously damage the lungs, respiratory system, or other organs, sometimes fatally.
- B. Lack of oxygen can cause death in minutes.

2. OSHA Requires Employers to Identify and Protect Against Breathing Hazards

- A. Engineering controls are the preferred form of protection, e.g., ventilation, using less toxic materials, and enclosing operations that create air contaminants.
- B. When air measurements reveal that engineering controls haven't brought air hazards to safe levels, employers must provide employees with respirators.

3. Wear the Respirator Designed to Protect Against Your Specific Job Hazards

- A. Check job procedures and/or chemical safety data sheets.
 - 1. Air-purifying or filtering respirators screen out or "wash" contaminated air, but don't supply oxygen.
 - A canister, cartridge, or filter color-code shows what chemical this type of respirator protects against.
 - Disposable surgical-type masks can be used only for very minimal dust hazards.
 - 2. Air-supplying respirators supply oxygen when the air contains 19.5% oxygen or less, and in situations termed Immediately Dangerous to Life or Health (IDLH).
 - Self-contained breathing apparatuses (SCBAs) have tanks that hold limited amounts of air and signal when air is low.
 - Full-face mask respirators connect with tanks or compressors that provide an unlimited supply of air. The connecting hoses, however, can get in the way.

4. Get a Good Respirator Fit That Will Seal Out Contaminants

- A. OSHA requires employees to have fit tests to ensure a good seal. A respirator should:
 - 1. Be secure, but not too tight, around the chin
 - 2. Not slip
 - 3. Not pinch the nose
 - 4. Allow you to move your head and talk

5. Not Everyone Can Wear a Respirator

- A. You may not be able to get a good fit or use a respirator safely if you:
 - 1. Wear eyeglasses
 - OSHA says contact lenses can be worn with any type of respirator, but their use is not recommended in dusty atmospheres while wearing a half-mask face piece.
 - 2. Have a beard or sideburns
 - 3. Wear a skull cap
 - 4. Are missing dentures
 - 5. Have breathing problems or a heart condition
 - 6. Are heat sensitive or claustrophobic (fear of confined spaces)

6. Inspect Respirators to Be Sure They Retain Protective Ability

- A. Inspect respirators before and after each use, and report:
 - 1. Connections that aren't tight
 - 2. Holes, cracks, tears, or other damage
 - 3. Wear or deterioration, especially in rubber parts like the face piece seal and connecting tube.
 - 4. Dents or corrosion in filters, cartridges, or canisters
 - 5. Less than a full charge in an air or oxygen canister

7. Maintain and Store Respirators Properly

- A. Remove respirators without contaminating your skin or clean areas.
- B. Follow decontamination, cleaning, and disinfecting procedures.
- C. Store the respirator so it's protected from dust, sunlight, heat, extreme cold, excessive moisture, and damaging chemicals.
 - 1. Respirators stored in lockers or tool boxes must be in carrying cases or cartons.
- D. Rest the respirator's rubber and plastic parts in their normal position for storage.
 - 1. Don't squish. Doing so will deform and impair the seal.

Summation: Wear a Properly Fitted Respirator to Protect Against Breathing Hazards

Learn to fit and use respirators to ensure safe levels of oxygen and to avoid inhaling harmful contaminants.