

Safety Bugle

Today's Topic: Respiratory Protection



Introduction

The OSHA Standard for Respiratory Protection is found in 29 CFR 1926.103 Subpart E and 1910.134. Respiratory hazards in the workplace should be controlled whenever possible using engineering, work practice, or administrative controls. However, if these controls are not feasible or do not provide sufficient protection, employees may need to utilize respiratory protection. Employees who are required to use respiratory protection to perform their work activities must participate in your company's Respiratory Protection Program.

Respiratory Hazards

- Harmful dusts (lead, silica, and other heavy metals)
- Fumes and smokes (welding fume)
- Gases and vapors (chemical exposures)
- Oxygen deficiency (oxidation, displacement, and consumption)
- Biological hazards (tuberculosis, whooping cough, flu viruses)

Respiratory Protection Written Program

The respiratory hazards in the workplace must be evaluated. If it is determined that respirators are required, a Respiratory Protection Program must be written. It must include information on respirator selection, medical evaluations, fit testing, user training, respirator use, schedule for respirator care, and auditing for employee compliance.

Respirator Types

- **Air-Purifying Respirators (APR)** clean the air you breathe using filters, cartridges, or canisters. APRs include half face, full face, N95, and PAPR respirators.
- **Atmosphere Supplying Respirators** supply the user with breathing air from a source independent of the ambient atmosphere. Supplied Air Respirators (SAR) and Self Contained Breathing Apparatus (SCBA) are examples of atmosphere supplying respirators.

IDLH

Atmospheres that pose an immediate threat to life (such as low oxygen levels) or cause irreversible health effects are considered **I**mmediately **D**angerous to **L**ife or **H**ealth. Only an SCBA or an air-supplying respirator with an auxiliary SCBA can be used.

Medical Evaluations

Wearing a respirator can be physically taxing to the body. Before and personal are required to wear a respirator and can be fit tested they must be evaluated to ensure that they are physically capable to do so. A medical questionnaire

must be filled out and it may be required to have a physical exam and medical tests.

Fit Testing

All required respirator users must be fit tested by a qualified professional before using a respirator. The fit test must be passed using the same type and size of respirator that will be worn on the jobsite. Persons using respirators must be re-tested annually to ensure that a proper fit is maintained.

Respirator Use

Each time that a respirator is donned a pressure test must be performed to make sure a good seal is established.



NEGATIVE PRESSURE FIT CHECK
Block ends of cartridges with hands. Inhale. If mask caves in, you have a tight fit.



POSITIVE PRESSURE FIT CHECK
Place palm over exhalation valve. Exhale gently. If mask balloons, you have a tight fit.

Persons who have facial hair wear glasses, goggles or other PPE are not permitted to use tight-fitting respirators if there is interference with the seal or valve function.

While working wearing a respirator the user must be monitored for signs of stress or work area changes that could affect respirator effectiveness. IDLH procedures must be established and employees fully trained.

When wearing a respirator always leave the work area when:

- Vapor is detected or gas breaks through.
- There is a change in breathing resistance.
- Any leakage is detected.
- A change in filter, cartridge or canister elements is required.
- The respirator needs repair.

Care and Maintenance

- Inspect the respirator before and after each use for any signs of deterioration or malfunction.
- Clean the respirator after each use.
- Never use a respirator if you find any defects.
- Wash dry and store in a sealable plastic bag.
- Respirators should be stored carefully in a protected location away from excessive heat, light, moisture, dust and chemicals.
- Always store to prevent deformation of the respirator.