Selecting a Respirator for Trainers and Supervisors

Objective: Select a respirator to protect against hazards in the air.

Trainer’s Note

Respirators protect workers’ lungs from dust, mold, mist, and chemicals. For this module:

- Discuss the information below on different types of hazards and respirators.
- Review your written Respiratory Protection Program with workers.
- Review your normal working activities that require respirators.
- Show workers the different respirators used in your workplace.
- Review the important points.
- Have workers take the True/False quiz to check their learning.

Background

Workers are often exposed to hazards in the air:

- Working around heavy dust in warehouses and greenhouses.
- Working around mold.
- Handling or applying pesticides.
- Spraying paint.
- Using solvents or other chemical irritants.
- Working around allergens — any substance to which a worker is allergic.

Respirators protect workers against those hazards. Three types of respirators are used during normal work activities:

- **Particulate respirators** use a filter to trap solid particles like dust or mold. They also filter out liquid particles like paint or pesticide mist. They are sometimes called *N95 respirators*.
- **Gas/vapor respirators** use a cartridge to absorb gases and vapors. They are also called *single cartridge respirators*.
- **Combination respirators** have a filter for particles and a cartridge for gases and vapors. They are also called *dual cartridge respirators*. 
A Self-Contained Breathing Apparatus (SCBA) is not often needed in landscaping and horticultural services. An SCBA provides extreme protection for:

- Fire fighting.
- Atmosphere with less than 19.5 percent oxygen.
- Unknown atmosphere.
- Atmosphere that can cause death.
- Atmosphere from which the worker cannot escape.

**Note:** Disposable dust masks are not recommended. The protection they provide is unknown. They should only be used for nuisance levels of dust, mold, and mist.

**The Respiratory Protection Program**

Your employer should have a written Respiratory Protection Program (RPP). It should describe:

- When a respirator is required.
- Medical evaluations needed.
- How to select a respirator.
- How to use respirators.

Review your employer’s RPP. In particular, look for details on your own normal working activities.

**Material Safety Data Sheets**

Material Safety Data Sheets (MSDSs) also specify respiratory protection. Check MSDSs for details on pesticides and chemicals.

**General Cautions**

- If the hazard appears to be immediately dangerous to life and health (IDLH), leave the area immediately or do not enter. If you must enter, you must use an SCBA.
- Use a full-face respirator if your skin or eyes are irritated. If not, a half-mask respirator is acceptable.
- You must fit-test a respirator each time you use it. You may not be able to use a respirator if you have facial hair, scars, or hollow temples. For more details, see the Tailgate Safety Training module *Respirator Fit*.

**Select a Particulate Respirator**

- Choose a safe level of protection. If you are not sure, choose the safest protection, Type 100 or HEPA:
  - Type 95 = 95 percent efficient; appropriate for most dust, mold, or mist.
  - Type 97 = 97 percent efficient; higher level of protection.
  - Type 100 or HEPA = 99.7 percent efficient; used with highly toxic substances like asbestos, lead, and cadmium.
- Pesticide or paint mists may contain oil particles. If you are not sure, use P or HE filters:
  - N = Not resistant to oil; do not use with oil.
Select a Gas/Vapor Respirator

- Choose the correct color-coded cartridge. If you are not sure, choose Olive Green:
  - White = Acid gas
  - Black = Organic vapors
  - Green = Ammonia gas
  - Yellow = Acid gas and organic vapor
  - Olive Green = Multi-gas combinations

Select a Combination Respirator

- Choose a Type 100 or HEPA filter.
- Choose a color-coded cartridge according to the list above.
- If you are not sure, choose a combination respirator. It protects against particles as well as gases and vapors.

General Cautions

- Change filters:
  - When it becomes hard to breathe or
  - According to the manufacturer’s instructions.
- Change cartridges:
  - When you taste or smell a substance or
  - When your eyes, nose, throat, or lungs become irritated or
  - According to the manufacturer’s instructions.
- After use, you must clean and store respirators carefully.
- For more details, see the Tailgate Safety Training module Properly Cleaning and Storing Respirators.

Review These Important Points

- If things appear to be IDLH (immediately dangerous to life and health), leave the area or do not enter.
- If you’re not sure, choose the safest protection:
  - Combination respirator.
  - Type 100 filter.
  - Olive Green multi-gas cartridge.

About These Modules

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Selecting a Respirator

Name

True or False?

1. Type R filters protect against all hazards. T F
2. SCBAs are required for working around dust and mold. T F
3. Yellow cartridges protect against acid gas and organic vapors. T F
4. Respirators are not required for normal working activities. T F
5. Particulates include both solids and liquids. T F