



# Tailgate Safety Training for Landscaping and Horticultural Services

Agricultural Safety Program, 590 Woody Hayes Drive, Columbus, OH 43210

## Respirator Fit

**Objective: Wear the correct respirator for the job and make sure it fits properly.**

### *How to Use This Module*

Many daily jobs require the use of respirators to protect workers' lungs. For this module:

- Read the information below on types of respirators and safe practices for using and fit-testing respirators.
- Ask your supervisor to demonstrate how to fit-test respirators.
- Ask your supervisor to observe while you practice fit-testing respirators.
- Review the important points.
- Take the True/False quiz to check your learning.

## Background

Many jobs involve harmful pesticides and chemicals. Employers must determine what respiratory protection is needed for the job. Workers must use that protection to prevent harmful effects. Workers must fit-test their respirators each time they put one on.

## Dust/Mist Respirator

A dust/mist respirator will always have two straps. Used properly, it protects your lungs by removing small particles from the air you breathe. It can protect you from:

- Most dusts, including perlite, vermiculite, and stone dusts
- Mists
- Pollen
- Some low toxicity pesticides

## Dual- and Single-Cartridge Respirators

Dual- and single-cartridge respirators are available to handle a long list of contaminants. They are used in the green industry for protection against pesticides, ammonia, toxic paints, and solvents. However, they are not suitable for use in enclosed spaces where toxic gases may crowd out the oxygen. Nor are they designed for use against gases that are extremely toxic even in small concentrations. They should only be used for contaminants their cartridges are specifically designed to handle.

## Air-Supplied Respirator

An air-supplied respirator should be worn in oxygen-limited environments. It is also appropriate for use with manure. An air-supplied respirator must be used if:

- Cartridges are not available for the chemical.
- Pesticide or organic vapor concentrations exceed OSHA permissible exposure limits or other published exposure levels. For more information, refer to the Material Safety Data Sheet (MSDS) for the chemical.
- Toxic gases are present in an enclosed space.

## Do NOT Use a Respirator If

- You have a beard, mustache, long sideburns, or a deep facial scar or deformity that prevents a tight fit.
- You have lung disease, heart trouble, or breathing problems. A doctor's advice may be needed before using a respirator in these situations.
- It has not been approved for the specific hazard you are protecting yourself against.
- Your eyeglasses interfere with proper fit. Fit the respirator first, then put eyeglasses on over the respirator.

## Fit Tests

It is critical to perform a fit test each time you put on a respirator. You need to check for a tight seal between the facepiece and your face.

### Dust/Mist Respirator Fit Test

- Check for proper fit each time you put on a dust respirator.
- Cup both hands in front of the mask. Be careful not to push on the mask or move it.
- Inhale deeply. Check to see if the facepiece collapses toward your face.
- Smile, then frown.
- If the mask is drawn in and no air is leaking in around the edges, you have a proper fit.
- If you don't have a proper fit, try readjusting the straps or repositioning the respirator on your face.
- Repeat the test until you have a proper fit.
- Check the written material that comes with the respirator for other specific fitting instructions.

### Dual-Cartridge Respirator Fit Test



- Do a positive pressure test.
  - ◆ Put on your respirator and block off the exhalation valve with the palm of your hand, as shown.
  - ◆ Gently exhale, then hold it for about 10 seconds.
  - ◆ Place your hand on the facepiece to see if it is bulging slightly.
  - ◆ Smile, then open your mouth. If you notice a slight bulge and you don't detect any air leaks, you have a proper fit.



- Do a negative pressure test.
  - ◆ Place the palms of your hands over the cartridge openings (as shown in the picture above), and gently inhale, holding your breath for 10 seconds.
  - ◆ You will notice that the facepiece is collapsing slightly.
  - ◆ Smile, then open your mouth. If the facepiece is collapsing slightly and you don't detect any air leaks, you have a proper fit.
- **Caution!** You must do both a positive and a negative pressure test to ensure a proper fit. If needed, make adjustments and repeat both tests until you have a tight fit with no leaks.

## Review These Important Points

- Respirators help protect your lungs.
- Choose the proper respirator for the hazards you are working around.
- Use the correct cartridge depending on what it will protect you from breathing in — pesticides, ammonia, dust paint sprays, or other contaminants.
- Read the instructions that come with the respirators and also the labels of pesticides and other contaminants.
- Be sure there's a tight seal between your face and the facepiece. Perform the fit tests!

## About These Modules

The author team for the training modules in the landscape and horticultural tailgate training series includes Dee Jepsen, Program Director, Agricultural Safety and Health, Ohio State University Extension; Michael Wonacott, Research Specialist, Vocational Education; Peter Ling, Greenhouse Specialist; and Thomas Bean, Agricultural Safety Specialist. Modules were developed with funding from the Occupational Safety and Health Administration, U.S. Department of Labor, Grant Number 46E3-HT09.

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Answer Key: 1 = T, 2 = T, 3 = F, 4 = T, 5 = F.

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EXTENSION

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## Respirator Fit

*Name* \_\_\_\_\_

### True or False?

1. It is important to perform respirator fit tests to check for a tight seal between the facepiece and your face. T F
2. You should not wear a respirator if you have a mustache or a beard. T F
3. After inhaling deeply, while performing the dust respirator fit test, the respirator should have bulged outward. T F
4. When using a dual-cartridge respirator, you should perform a positive and negative pressure test. T F
5. Dual cartridge respirators can be used for any type of toxic gas. T F