



Training Solutions, Delivered!

**THE RESPIRATORY  
PROTECTION  
PROGRAM:  
*Employee Training (Concise)***

**Leader's Guide, Fact Sheet  
& Quiz**

Item Number: 3935  
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***This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.***

## **PREPARING FOR THE MEETING**

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes before the quiz itself, which is on the final page.

## **CONDUCTING THE PRESENTATION**

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

**3935 THE RESPIRATORY PROTECTION PROGRAM:  
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FACT SHEET**

**LENGTH: 9 MINUTES**

**PROGRAM SYNOPSIS:**

Exposure to hazardous chemicals in the form of dusts, fumes, mists and gases may cause lung damage, cancer and other serious ailments to vital organs and the central nervous system. To protect you from these adverse health effects, your company has established a written respiratory protection program in accordance with OSHA's Respiratory Protection Standard. This program, which is available for employee review, outlines the measures taken by your employer to ensure the health and safety of your respiratory system. This video shows employees how this plan works to protect them from respiratory hazards.

Topics include employee medical evaluation, respirator selection and assignment protection factors, various types of respirators, hazards of IDLH atmospheres, qualitative and quantitative fit tests, user seal checks and cleaning and storage of respirators.

**PROGRAM OBJECTIVES:**

After watching the program, the participant will be able to explain the following:

- How assigned protection factors (APF's) are used to determine the appropriate respirator;
- What protection is afforded by the various types and classes of respirators;
- How qualitative and quantitative fit tests are performed;
- How to perform positive and negative pressure seal checks;
- How to properly clean and store a respirator.

**INSTRUCTIONAL CONTENT:**

**MEDICAL EVALUATION**

- Before being allowed to use a respirator, the company will arrange for you to have a medical evaluation. A licensed medical professional will conduct this evaluation and determine whether you can safely wear a respirator while working.
- Appendix C of the OSHA standard 29 CFR 1910.134 contains a medical questionnaire. It is mandatory that you either fill out this questionnaire or undergo an initial medical exam that obtains the same information as the questionnaire.

**RESPIRATOR SELECTION & ASSIGNED PROTECTION FACTORS**

- In most situations, your employer will determine which type of respirator is required for a particular work environment. The types of respiratory hazards and levels of airborne contaminants may vary throughout the workplace.
- As part of the written respiratory protection program, your employer has evaluated each of these areas and selected a respirator that will reduce your exposure to a safe level
- A survey of workplace respiratory hazards has been performed and air sampling has been used to identify contaminants in the air and their concentration.
- OSHA has established permissible exposure limits (or PEL's) for various contaminants. The amount, by which the concentration of an airborne contaminant exceeds the permissible exposure limit, is referred to as the hazard ratio.
- OSHA's Respiratory Protection Standard and many manufacturers have assigned a "protection factor" to common respirator classes and styles. This assigned protection factor, commonly called an APF, gives an indication of how much the respirator will reduce the user's level of exposure compared to the level of contaminant in the ambient air. This number is necessary for determining the proper respirator for the job.
- APF numbers for types of respirators range from 10 to 10,000 and have been determined through much research and testing. For example, a half mask air-purifying respirator has an APF of 10, while a full face-piece respirator has an APF of 50.
- This is why it is so important to wear the proper respirator for the job. Changing into a respirator with a lower APF than the one assigned to you may not provide adequate protection from the hazards.
- If you have any questions concerning the respirator you have been assigned or why it was selected, ask your supervisor.

## **DUST MASKS**

- Disposable dust masks are sufficient for areas where low levels of dusts are airborne. Dust masks are not to be worn while spray painting because they cannot protect against harmful vapors.
- When the mask becomes clogged with dust, dispose of it and get another one.

## **FILTER RESPIRATORS**

- When you need more protection than that offered by dust masks, filter respirators are usually an appropriate option. They filter the air you breathe.
- Filter respirators that protect against hazardous chemicals are known as chemical cartridge respirators. The cartridges capture gases and vapors given off by chemicals.
- Each cartridge has a specific purpose, and some protect against only one chemical while others protect against several types of chemicals.
- Your employer will establish a change out schedule for chemical cartridges to ensure they are changed before the end of their service life and before “breakthrough” occurs. Break through is when an employee detects vapor or gas in their respirator.
- Make sure you understand your organization’s change out schedule and always change chemical cartridges as required.

## **QUALITATIVE & QUANTITATIVE FIT TESTS**

- Before being allowed to wear a respirator, employees will undergo a formal fit testing procedure to ensure a proper fit. You will undergo a fit test at least once a year while you are in the respiratory program.
- One type of test is a qualitative fit test. A qualitative test uses scented chemicals, smoke or other irritant to determine if you can smell or taste it through your respirator.
- If you can smell or taste the irritant, then you don’t have a good fit and must be re-fitted.
- Another type of test is a quantitative test. A quantitative test uses an instrument to numerically measure the leakage of a substance into the respirator.
- While undergoing fit testing, the subject will be asked to perform several exercises to simulate the movements that occur during respirator use.
- A properly fitting respirator is essential to providing protection from respiratory hazards.

## **USER SEAL CHECKS**

- Fit testing should not be confused with user seal checks. A user seal check must be conducted every time you put on a respirator.
- The positive pressure test involves putting the palm of your hand over the exhalation valve of the respirator and gently breathing out into the mask. If you feel a buildup of pressure beneath the mask and see the side of the face piece bulge out slightly, you have a good fit.
- A negative pressure test is performed by placing both hands over the inhalation valves and breathing in gently. The face piece should collapse slightly against your nose. Hold your breath for 10 seconds; if the mask stays collapsed, you have a good fit.
- If you have any problems getting a proper seal, notify your supervisor.

## **CLEANING & STORAGE OF RESPIRATORS**

- To keep your respirator sanitary and in good working order it must be properly cleaned, disinfected and stored when not in use.
- First remove any filters, cartridges or canisters. Disassemble the face piece and remove the straps.
- Inspect the tightness of all connections and the condition of the various pieces such as straps, tubes, diaphragms and cartridges. Any defective parts should be repaired or replaced by a qualified person.
- Wash all parts of the respirator with a detergent recommended by the manufacturer and warm water. A bristle brush will remove excess dirt.
- Use warm water to rinse all of the parts. Be sure to rinse off all of the detergent because the residue can dry on the rubber and crack it or corrode metal.

- After thoroughly rinsing and draining, the parts should be immersed in a disinfectant of bleach, iodine or cleanser approved by the respirator manufacturer for two minutes. Once removed, the pieces should be completely rinsed, drained and then dried, either with a lint-free cloth or air-dried.
- When the respirator is reassembled and ready to store, put it in its case or a plastic bag. Store it in a clean, dry place approved by your company.

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**ANSWERS TO THE REVIEW QUIZ**

1. a

2. a

3. b

4. c

5. a

6. b

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**REVIEW QUIZ**

*The following questions are provided to determine how well you understand the information presented in this program.*

Name \_\_\_\_\_ Date \_\_\_\_\_

1. You must undergo a medical evaluation before being allowed to use a respirator at work.
  - a. True
  - b. False
  
2. A half face-piece air-purifying respirator has an assigned protection factor (APF) of \_\_\_\_\_.
  - a. 10
  - b. 50
  - c. 100
  
3. All cartridges for chemical cartridge respirators are designed to provide protection for one chemical only.
  - a. True
  - b. False
  
4. Which type of fit test uses an instrument to numerically measure the leakage of a substance into a respirator?
  - a. Quintessential
  - b. Qualitative
  - c. Quantitative
  
5. A user seal test must be conducted every time you put on a respirator.
  - a. True
  - b. False
  
6. Which user seal test consists of placing both hands over the respirator's inhalation valves and breathing in gently?
  - a. Positive
  - b. Negative
  - c. Neutral