WEEKLY SAFETY MEETING
All Euramax Subsidiaries

RESPIRATOR SAFETY

Safety Meeting Contents

- Meeting Notice
- Leaders Guide
- Employee Handout
- Employee Quiz
- Meeting Sign-In Sheet
- Employee Puzzle

PRIOR TO THE WEEKLY MEETING:

- Post the meeting notice by the timeclock
- Read through the Leaders Guide and Employee Handout to familiarize yourself with the topic for the week
- Make copies of the employee handout (one for each employee)
- Make copies of the employee quiz (one for each employee)
- Make copies of the weekly puzzle (one for each employee)

AT THE SAFETY MEETING:

- Pass around the meeting sign-in sheet – ensure all employees present at the meeting print and sign their names
- Pass out the employee hand-out
- Pass out the employee quiz
- Pass out the weekly puzzle
- Keep the meeting simple
- Encourage discussion and questions
WEEKLY SAFETY MEETING NOTICE

THIS WEEK, OUR SAFETY MEETING WILL COVER
RESPIRATOR SAFETY

TIME: ________________________________________________

DATE: ________________________________________________

PLACE: _______________________________________________
RESPIRATOR SAFETY

Leaders Guide

EURAMAX PROCEDURE REFERENCE:
B-1.5: Respiratory Protection

MEETING OBJECTIVE:
Dust, fumes, mists, gases, and vapors are present in most workplaces to some degree. Their presence results in respiratory hazards. The purpose of this meeting is to heighten your employees’ awareness of the potential respiratory hazards in your facility and to teach them the basics of proper selection, use, and maintenance of respirators.

MEETING PREPARATION:
Read the Euramax procedure, understand the contents, and ensure compliance.

Gather samples of respirators used at your facility. Bring them to the meeting.

Make a list of jobs at your facility that require the use of a respirator. For each job, list the appropriate type of respirator to use.

Review proper ventilation procedures. Be prepared to talk about them at the meeting.

Be prepared to demonstrate how to perform positive-pressure and negative-pressure fit checks.

Review procedures for inspecting, cleaning, maintaining, and storing respirators. Be prepared to discuss this information at the meeting.

Review the Employee Handout to see if there are any other materials you wish to bring to the meeting.

Use a flip chart during the discussion to write key points and employee responses. This technique visually reinforces your instruction.

MATERIALS CHECKLIST:

- Samples of respirators used in your department
- List of jobs requiring respirators and appropriate respirator for each job
- Flip chart and marking pens
MEETING
INTRODUCTION
Whenever harmful material is present in the atmosphere, a respirator should be worn. Today we’re going to talk about when you need to use a respirator and which respirator to use for different jobs. We’re also going to discuss how to fit a respirator properly. And finally, we’re going to cover proper inspection and maintenance of these devices to ensure their effectiveness when you need them to protect you.

There are two basic classifications of respiratory devices: air purifying (negative pressure) and air supplying (positive pressure). Air-purifying respirators use filters or sorbents to remove harmful substances from the air. They range from simple disposable masks to sophisticated devices. Air-purifying respirators do not supply oxygen and may not be used in oxygen-deficient atmospheres or in ones that are immediately dangerous to life or health.

Air-supply respirators (also called atmosphere-supplying respirators) are designed to provide breathable air from a clean air source other than the surrounding contaminated work atmosphere. They range from supplied-air respirators and self contained breathing apparatus (SCBA) to complete air-supplied suits.

**Question:** When is respiratory equipment necessary?

**Answer:** Respirators are required when the atmosphere is hazardous. The atmosphere is considered hazardous if there’s an oxygen deficiency or if there are toxic or disease-producing vapors, mists, particulates, fumes, or gases present.

**Question:** What other ways can we protect ourselves against air contaminants?

**Answer:** Euramax takes many steps to eliminate or control air hazards:
- Some operations are enclosed to prevent the spread of contaminants throughout the work area.
- Ventilation equipment reduces concentrations of contaminants in the air.
- Less toxic materials and processes are used whenever possible to control air contamination.

**Question:** Sometimes, however, it’s impossible to control the hazards sufficiently. What do we do then?

**Answer:** Air-purifying and air supply respirators.
RESPIRATOR SAFETY

Leaders Guide

*Air-purifying* respirators filter harmful substances from the air. But they do not supply oxygen so they cannot safely be used in oxygen-deficient atmospheres or in ones that are immediately dangerous to life or health.

*Air-supply* respirators provide breathable air from a clean air source other than the surrounding contaminated work atmosphere. The range from supplied-air respirators and self-contained breathing apparatus (SCBA) to compete air-supplied suits.

**Explain** that disposable masks are a common simple kind of air-purifying respirator. But emphasize their limitations.

Disposable masks are not respirators and should never be worn in situations where a respirator is called for.

They have limited applications. They only filter out some low levels of hazardous air contaminants.

Disposable masks do not provide any protection against lack of oxygen, temperature extremes, high concentrations of dust, or toxic vapors, mists, fumes, or gases.

They are not made for continuous use. Employees should throw away after using them.

**Question:** What factors must be considered when choosing a respirator?

**Answer:**

- The nature of the hazardous operation or process
- The type of air contaminant and its concentration
- Time needed to perform the task
- The location of the hazard with respect to a source of uncontaminated air.

**Discuss** the jobs at your facility that require the use of a respirator. For each job indicate the appropriate respirator. (Use the list you made before the meeting. Display the sample respirators you brought to the meeting).
RESPIRATOR SAFETY

Leaders Guide

Warn employees that using the wrong kind of respirator for the hazard involved can be dangerous. For example, particulate filter respirators are of no value as protection against solvent vapors, hazardous gases, or lack of oxygen.

Tell employees that they should always check with a supervisor if they’re unsure of which type of respirator to use.

Demonstrate how to fit a respirator correctly and how to perform this two-part fit check:

Positive-pressure fit check. Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. (Note: For most respirators, this method of testing requires removing the exhalation valve cover before closing off the exhalation valve. After the test, carefully replace the cover.)

Negative-pressure fit check. Close off the inlet opening of the cartridge(s) or canister by covering it with the palm of the hand(s) or by replacing the filter seal(s).

Inhale gently so that the facepiece collapses slightly, and hold your breath for 10 seconds. If the facepiece remains in its slightly collapsed position and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

Question: What else should you consider when fitting a respirator?

Answer: Does the mask fit comfortably on the face and cheeks? Does the mask fit comfortably on the nose? Is there adequate room for eye protection? Is it possible to talk? Does the mask fit properly on the chin? Are the straps tight enough? Does the respirator have a tendency to slip?

Question: What are some signs that a respirator isn’t working properly?

Answer: Damage to the respirator Breathing difficulty Dizziness Smelling or tasting contaminants
RESPIRATOR SAFETY

Leaders Guide

**Question:** What should you do if you think a respirator isn’t working properly?

**Answer:** Leave the work area immediately and notify a supervisor about the problem. Tag the respirator so that no one else will use it until it is repaired or replaced.

**Show** how to inspect a respirator for signs of wear, deterioration, or damage.

**Question:** When should you inspect a respirator?

**Answer:** You should inspect a respirator before and after each use.

**Explain** that special attention should be given to rubber or plastic parts that can deteriorate. The facepiece, the face seal surface, headband, valves, connecting tube, fittings, and canister(s) must all be in good condition.

**Question:** Is it ever okay to alter or modify a respirator?

**Answer:** No. You could be putting your life, or the life of a co-worker, in danger. Never alter or modify a respirator. This includes using similar parts made by another manufacturer. Repairs to respirators may be made only by experienced people using parts specifically designed for the respirator.

**Emphasize** that proper care and maintenance of respirators is essential.

- Wash respirators in a detergent solution.
- Do not use solvents to clean respirators. Plastic or rubber components will be adversely affected by many solvents.
- Water-based paints or enamels may be removed with a cloth soaked in a soap and water solution.
- Don’t try to remove paint, varnish, or lacquer from cartridges or filters, they must be discarded.
- Scrub the facepiece and parts with a soft brush to make sure all foreign material is removed.
RESPIRATOR SAFETY

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Rinse in clean, warm water. All traces of detergent must be removed to avoid skin irritation.

Disinfect in a sanitizing solution that contains an agent that kills bacterial.

Air dry the respirator on a clean surface, or hang it from a wire.

Store in a suitable area, protected from heat, or extreme cold, sunlight, excessive moisture, dust, or damaging chemicals.

SUMMARY:
Respiratory safety is an important issue. Please remember what you have learned today about the proper selection, use, and maintenance of respirators. This information could save your life some day.

EMPLOYEE HANDOUT:
A. Employee Handout
B. Respirator Safety Quiz
C. Respirator Safety Crossword
D. Respirator Safety Puzzle

QUIZ ANSWERS:
1. True
2. False
3. d
4. False
5. b
6. False
7. c
8. d
9. True
10. True
RESPIRATOR SAFETY

Leaders Guide

PUZZLE ANSWERS:

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 C  S  S  L  H  A  
 I  P  9  F  I  B  R  O  S  I  S  
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Respiratory Protection
Respirators Defend Your Lungs

Your body works hard to protect your respiratory system from airborne contaminants. Your nose begins the job by filtering out large particles and warming and moistening the air as it enters your body. A blanket of mucus lining the tubes to your lungs traps smaller particles, which are moved back up toward your throat by the action of tiny hairs, called cilia, that line your air passages. Your cough reflex completes the task of getting rid of contaminants. That's why smoke and dust make you cough—your body is just doing its job. Your lungs then move the 20% of the air that is pure oxygen into your bloodstream where your body can use it.

When You Need a Respirator
But what if your body's air filtration system is bombarded with too many contaminants? When your air passages are overloaded, they will not be able to prevent this material from getting to your lungs. Contaminants can have an immediate and noticeable effect when they irritate your lungs, but much more dangerous are the long-term effects of a buildup of contaminants over time. Often, a victim of this sort of hazard is not aware of the problem until the lungs are damaged permanently. Fortunately, respirators can prevent this kind of damage by filtering out these particles for you.

Air-Purifying Respirators
If you are working in an environment that produces dusts, fumes or harmful mists, you should be using an air-purifying respirator (APR). Containing a filter designed for screening out these contaminants, these may be simple disposable face masks or rubber masks fitted with disposable or cleanable filters.

Cartridges and Canisters
Gases and vapors make up another group of health hazards. These substances are not really particles—they are dissolved in the air, so your air passages have no way of getting them out. Furthermore, such gases can pass through your lungs to enter your bloodstream, damaging your body and brain. When working around these hazards, you need an APR fitted with a cartridge or canister that absorbs or chemically reduces dangerous gases. The type of cartridge or canister you use must be specific for the gas in your work area—the wrong one will have no safety effect at all. And it must be replaced according to manufacturer's guidelines when it is used up.

Supplied-Air Respirators
Remember how much oxygen there is in pure air? That's right—20%. The atmosphere in your workplace has such a high level of contaminants that there is not enough oxygen left in the air to support life. It will not do any good to filter the air. You need to replace the air with an outside source. Supplied-air respirators (SARs), also called air-line respirators, connect the user, by means of an air hose, to an outside source of clean air supplied by a compressor or compressed-air cylinder. You may also need this type of respirator if the contaminant in your workplace cannot be filtered or absorbed by ordinary APRs. Other situations requiring SARs are oxygen deficient environments and environments that are dangerously hot or cold or so toxic that they have been identified as "immediately dangerous to life and health" (IDLH). Under IDLH conditions you must use a respirator that provides positive air pressure so there is no chance of contaminants being drawn into the mask when you inhale.

Self-Contained Breathing Apparatus
Sometimes working conditions do not permit the use of air lines. With a self-contained breathing apparatus (SCBA), you carry a supply of air in a portable tank on your back. Use SCBAs when you need mobility, when falling objects or machinery can damage an air hose, or when the job to be done takes 30 minutes or less. They may also be used when you are first entering an environment in which the air quality is unknown.

If your lungs are the gateway to your body, your respirator is like a guard at the gate. In order to protect yourself, you must make sure your guard is armed with the right weapons. This means choosing the appropriate respirator for your working environment. 🧽
RESPIRATORY SAFETY
Employee Quiz

How much do you know about respiratory protection? Select the best response to the following statements.

1. You need protection from respiratory hazards both on and off the job.
   True or False

2. You can smell all gases and vapors?
   True or False

3. A respiratory protection program:
   a. Is designed to protect your health
   b. Is a team effort involving you and your employer
   c. Teaches you how to care for a respirator
   d. All of the above

4. A maintenance-free respirator needs to be cleaned after each use.
   True or False

5. Which one of the following may prevent you from wearing a full-face mask?
   a. You don’t want to wear it
   b. You have a skin condition
   c. You wear glasses
   d. The strap messes up your hair

6. A maintenance-free dust mask provides protection in IDLH settings.
   True or False

7. An atmosphere-supplying respirator:
   a. Is best for light use
   b. Never provides protection in IDLH setting
   c. Uses a separate air supply
   d. Is maintenance-free

8. Which of the following may require you to be fitted for a new respirator?
   a. getting dentures
   b. getting eyeglasses
   c. having a facial injury
   d. any of the above

9. A respirator is effective only when it fits correctly.
   True or False

10. If you don’t use a respirator and are exposed to hazards, you may develop health problems such as bronchitis or even cancer.
    True or False
WEEKLY SAFETY MEETING
All Euramax Subsidiaries

RESPIRATORY SAFETY
Meeting Sign In Sheet

LOCATION ________________________________

MEETING DATE ________________ MEETING CONDUCTED BY ________________________________

CONTENTS OF MEETING
(Attach Handouts, etc.)

ATTENDEES:

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RESPIRATORY SAFETY
Employee Puzzle

Across
1. Because APRs are negative pressure, the _____ seal between the wearer's face and the respirator is critical
4. Respirators are of two general "fit" types
8. Substances such as iron oxide or tin oxide that create minimal pulmonary ______
9. Pulmonary —— reaction is caused by such substances as silicates
10. Half-face and Full-face respirators use filtering ______
13. Type of masks that are similar to full-face respirators, but use canisters instead of cartridges
15. _______ protect against respiratory hazards
18. Gaseous contaminants such as nitrogen dioxide, phosgene, and arsenic trichloride are known as _______
19. APRs are normally designed to be ______ pressure respirators-they are powered by the wearer's lungs
20. Maximum Use Concentration (Abbrv.)
21. Do not use Chemical Cartridges if the contaminants, their concentrations, or the oxygen level is _______

Down
1. With tight-fitting respirators employees must avoid ____ hair between the respirator face piece seal and the face
2. Always properly ______ and maintain your SCBA before, during, and after use
3. End of Service Life Indicator (abbrv)
5. The only type of personnel that should make repairs to a respirator
6. _____-user respirators must be cleaned as often as necessary to remain sanitary
7. A respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso
11. Systemic _____ enter the body through the lungs as a gas or vapor but affects other parts of the body
12. The route of entry that toxicologists consider the most important
14. Composite cylinders have a limited _____ life
16. OSHA considers any atmosphere with less than 19.5% of this to be ______ deficient
17. Self Contained Breathing Apparatus (abbrv.)