



Respirator Safety

You will learn

- The reasons respirators are necessary
- The capabilities and limitations of different respirators
- How to inspect, put on and maintain respirators
- What to do if something goes wrong while wearing a respirator

Medical Evaluations

- Don't use a respirator until a health care professional determines you are physically able to do so
- Management will organize the testing
- For people with existing medical conditions, respirator use can cause injury or death



Respirators Will Protect You

- Hazardous particles in the air can cause serious injuries or death
- Use a respirator whenever you enter an area with hazardous particles in the air
- You may not be able to see or smell hazardous air particles until it's too late

Two Types of Respirators

- Air purifying respirators (APRs)
 - Clean the air with
 - Filters
 - Cartridges
 - Canisters
- Supplied air respirators (SARs)
 - Supply you with clean air from an outside source
 - No MSU employees use this type

Air Purifying Respirators (APRs)

- Remove harmful substances from the air you breathe so you can stay safe
- Have tight fitting face pieces to stop you from breathing contaminated air



Two Types of APRs

- Particulate removing respirators
 - filter out dusts, fibers, fumes and mists
 - may be single-use disposable respirators or multiple-use respirators with disposable filters
- Gas and vapor removing respirators
 - remove contaminants by absorption, or chemical reaction
 - Gas masks are an example

Benefits of Air Purifying Respirators (APRs)

- Lightweight
- Portable
- Easy to inspect and maintain
- Not dependent upon supplied air

Limitations of Air Purifying Respirators (APRs)

- Contaminant-specific cartridges
- Communication
- Non-IDLH only
- Oxygen at 19.5% minimum
- Assigned protection factor of 10
- Not for use in emergency situations

Remember

Only use APRs in conditions where there is no question what the dangers are and that the APR will provide adequate protection.

Qualitative Fit Testing

- Ensures your respirator fits properly
- Is performed at initial fitting and then annually after that
- Relies on your ability to detect a harmless substance in your breathing space



Change Cartridges

- Any physical symptoms of exposure
- Odor or taste is present inside respirator
- Breathing becomes difficult
- During annual respirator fit tests and training

Positive Pressure Fit Check

- Check the fit of your respirator before every use
- Close off the exhalation valve and exhale gently
- Slight positive pressure should be felt
- Don't use if you hear or feel air leaking



Negative Pressure Fit Check

- Perform this test every time a respirator is put on
- Close off the inlets by covering with the palms
- Inhale gently so face piece collapses slightly, hold for 10 seconds
- Only use if no leaks are detected



Respirator Inspection

Facepiece

- Excessive dirt
- Cracks, tears, holes or distortion
- Inflexibility
- Cracked or badly scratched lenses
- Cracked or broken air-purifying element; threads or gaskets

Respirator Inspection

Head Strap or Harness

- Breaks
- Loss of elasticity
- Broken or malfunctioning buckles and attachments
- Excessive worn, serrated edges

Respirator Inspection

Exhalation Valve

- Foreign material build up
- Cracks, breaks, chips in valve
- Missing or defective cover
- Improper installation

Respirator Inspection

Air-Purifying Element

- Incorrect cartridge
- Incorrect installation
- Expired
- Cracks or dents

Respirator Cleaning

- Dirty, inoperative respirators will not effectively protect you
- Clean parts in the sink using warm water and soap

Respirator Storage

- Store in a bag or sealed container labeled with your name
- Store in a dry, room temperature, dust-free environment

Leave the Respirator Area if You

- Smell or taste something out of the ordinary
- Feel your eyes or throat becoming irritated
- Observe a change in your breathing
- Notice the face piece is leaking or other parts of the respirator are broken
- Hear an alarm signaling equipment has failed

Summary

- Working in an area with hazardous particles in the air can cause injury or death
- Air Purifying Respirators remove harmful substances from the air
- Fit Testing ensures a proper fit
- Make sure to clean and store your respirator properly