



Department of Labor & Economic Growth  
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## Construction Safety and Health Division

### Respiratory Protection

To reduce or eliminate occupational disease caused by exposure to air contaminated with harmful dusts, fog, fumes, mists, gases, smokes, spray, or vapors, the primary objective is to reduce or eliminate the atmospheric contamination. The prevention of atmospheric contamination must be accomplished, as far as feasible, by engineering control measures. When engineering controls are not feasible, or while they are being implemented, appropriate respiratory protection must be used.

Respirators are a common item of personal protective equipment found on construction work sites. Respiratory protection can range from simple particulate dust masks to supplied-air abrasive blasting hoods. Any respirator used must be certified by the National Institute for Occupational Safety and Health (NIOSH).

### Employer Responsibilities

The MIOsha [Part 451](#) Respiratory Protection Standard applies to all construction work operations where an employee uses a respirator. There are different sections of the standard that are required based upon the use of the respirator.

Where respirators are necessary to protect the health of the employee or whenever respirators are required by the employer, the employer must establish and implement a written respiratory protection program with worksite-specific procedures. The written program must include the following:

- Procedures for selecting respirators for use in the workplace;
- Medical evaluation of employees required to use respirators;
- Fit testing procedures for tight-fitting respirators;
- Procedures for proper use in routine and emergency situations;
- Procedures and schedules for cleaning, disinfecting, storing, inspecting, and otherwise maintaining respirators;
- Procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators;
- Training of employees in the respiratory hazards to which they are potentially exposed;
- Training of employees in the proper use and limitations of respirators;
- Procedures for regularly evaluating the effectiveness of the program.

Where respirator use is not required, but the employer allows employees to voluntarily wear respirators, either supplied by the employer or permitting employees to use their own respirators, there are still some requirements based on the type of respirator.

- If the respirator to be used is a filtering facepiece (dust mask) then the employer only has to provide the information contained in Appendix D to the standard. This information can be provided verbally or in written form. It is recommended that the method of providing the information be documented.
- If the respirator to be used is any type other than a filtering facepiece, the employer must establish and implement those elements of a written respiratory protection program necessary to ensure that any employee using a respirator voluntarily is medically able to use that respirator, and that the respirator is cleaned, stored, and maintained so that its use does not present a health hazard to the user. The employee would need to be trained on the use and limitations of the respirator.

### **How to Avoid Hazards**

As mentioned above, the preferred method for controlling air contaminants is to use accepted engineering controls. Dependent upon the type of operation and contaminant to be controlled, engineering controls could include:

- Mechanical local or general exhaust ventilation;
- Dust collection systems;
- Powered tools equipped with shrouds and high efficiency particulate (HEPA) vacuums;
- Enclosing cabs on machinery to limit exposure to contaminants;
- Utilizing wet methods for cutting or in dust suppression.

The implementation of an effective respiratory protection program is vital. A respirator only functions properly if it is the correct respirator for the contaminant it is designed for and if it fits properly. A respirator also must be cleaned, stored, and maintained properly.

For information on hazards associated with Asbestos, Lead and Silica at construction worksites, MIOSHA has created [Construction Fact Sheets](#) that address these hazards. They are available on the MIOSHA website at: [www.michigan.gov/miosha](http://www.michigan.gov/miosha), click on compliance; Construction Fact Sheets.

The MIOSHA Consultation Education and Training Division has developed a sample written respiratory protection program that can be downloaded from the MIOSHA website - [http://www.michigan.gov/documents/cis\\_wsh\\_cet5730\\_90302\\_7.doc](http://www.michigan.gov/documents/cis_wsh_cet5730_90302_7.doc)

There is also a Federal OSHA document entitled "The Small Entity Compliance Guide to the Revised Respiratory Protection Standard" that can be utilized to help answer questions or develop a written program.

Additional sources of information include:

The OSHA website - <http://www.osha.gov/SLTC/etools/respiratory/index.html>, and <http://www.osha.gov/SLTC/respiratoryprotection/index.html>

The NIOSH website - <http://www.cdc.gov/niosh/npptl/default.html>

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