

SECTION TWO – MIOSHA REGULATIONS

In 2012, the Office of Regulatory Reinvention (ORR) completed its review of workplace safety and health regulations to identify and eliminate rules that went above Federal OSHA and were obsolete, unnecessary, and over burdensome. The goal was NOT to eliminate any rules that would jeopardize employee health and safety. There were 611 MIOSHA rules recommended for rescission and 115 MIOSHA standards affected. As of March 31, 2014, the revisions to MIOSHA rules due to the ORR recommendations are 90 percent complete. To view the progress of revisions to MIOSHA rules and review the implementation strategies visit the [MIOSHA Standards Revision Update Table](http://www.michigan.gov/mioshastandards) found at www.michigan.gov/mioshastandards or contact the Michigan Department of Licensing and Regulatory Affairs (LARA), MIOSHA Standards Division at 517-322-1845.

PART 1: COMMON REGULATIONS FOR SAFETY AND HEALTH

CHAPTER 13: Hazard Communication/Employee Right-To-Know

The revised MIOSHA Part 42, 92, & 430 Hazard Communication standard (HCS) is now aligned with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). This update to the Hazard Communication Standard (HCS) will provide a common and coherent approach to classifying chemicals and communicating hazard information on labels and safety data sheets, will improve the quality and consistency of hazard information in the workplace, making it safer for workers by providing easily understandable information on appropriate handling and safe use of hazardous chemicals. This update will also help reduce trade barriers and result in productivity improvements for American businesses that regularly handle, store, and use hazardous chemicals while providing cost savings for American businesses that periodically update safety data sheets and labels for chemicals covered under the hazard communication standard.

All Michigan employers are required to develop a hazard communication program if their employees are exposed to hazardous chemicals.

The standard does not apply to:

- Hazardous waste as defined in Chapter 2.4 (such as spent solvents).
- Articles (anything that during the course of its normal use does not have the potential to result in exposure of the employee to a hazardous substance; e.g., shipping containers and tools), food, drugs, or cosmetics intended for personal consumption by employees while in the workplace (29 CFR 1910.1200).

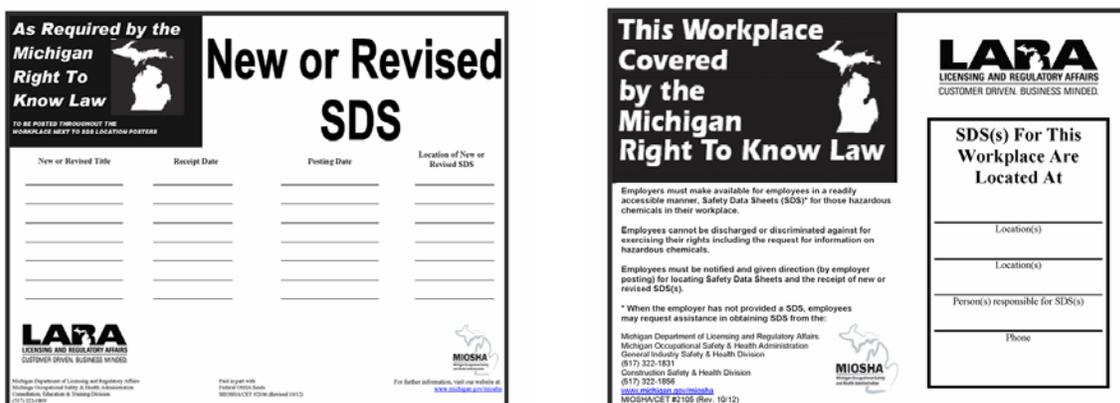
Product manufacturers are responsible for providing properly labeled containers. There are some federal acts with labeling requirements that supercede the labeling requirements of 29 CFR 1910.1200. If a product is subject to one of the following acts, the manufacturer must comply with that particular act's labeling requirements and not the hazard communication standard labeling requirements:



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- Federal Insecticide, Fungicide, and Rodenticide Act
- Federal Food, Drug, and Cosmetic Act
- Federal Alcohol Administration Act
- Consumer Product Safety Act
- Federal Hazardous Substances Act
- Federal Seed Act
- Toxic Substances Control Act

Posters stating where safety data sheets are located and who is responsible for their maintenance must be placed in conspicuous locations accessible to all employees - "*Safety Data Sheet Location*" (CET #2105). Additionally, a poster must be conspicuously displayed within five working days of the receipt of a new or revised safety data sheet - "*New or Revised SDS*" (CET #2106). This poster must be displayed for not less than ten working days.



Both posters are typically displayed in areas of the work place where other federal and state required postings may be found.

MIOSHA has developed a handout summarizing the major changes to the Hazard Communication Standard. The MIOSHA Hazard Communication handout is available at www.michigan.gov/ghs. Also available on this Web site are the [MTI HazCom & Right to Know Training Calendar](#) and new Hazard Communication Employee Training Options, any of which can be used to meet the 12/01/13 training deadline in the revised standard.

Also available at www.michigan.gov/ghs are numerous resources and OSHA Tools included the following:

RESOURCES

- Hazard Communication Sample Plan (CET-5530)
- Hazard Communication - Aligning with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) (CET-5531)
- MIOSHA Standards Affected by the New GHS/Hazard Communication Standard (CET-5532)
- MIOSHA Regulated Area Signs Affected by the New GHS/Hazard Communication Standard (CET-5533)
- Revised 2012 Hazard Communication Standard FAQ's (CET-0186)

- Right To Know Hazard Communication Compliance Guide (SP-22)
- Safety Data Sheet (SDS) Location Poster (CET-2105)
- New/Revised Safety Data Sheet (SDS) Poster (CET-2106)

OSHA TOOLS

- Safety & Health Topics Page: Hazard Communication
- Labeling
- Safety Data Sheets
- Pictograms
- Quick Cards
- OSHA Wallet Card
- OSHA Brief - *Hazard Communication Standard: Labels & Pictograms*
- OSHA Fact Sheet - *Training Requirements for the Revised Hazard Communication Standard*
- Interim Guidance on Enforcement of the Revised Hazard Communication Standard
- OSHA Publication 3695 - *Hazard Communication: Small Entity Compliance Guide for Employers That Use Hazardous Chemicals*
- OSHA Publication FS-3696 - *Steps to an Effective Hazardous Communication Program for Employers that Use Hazardous Chemicals*
- *United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Publications*

Note: OSHA and MIOSHA Hazard Communication Standards are based on GHS Revision 3.

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CHAPTER 14: MIOSHA Posting

The “*MIOSHA Administrative Rules - Part 13, Inspections and Investigations, Citations, and Proposed Penalties*” requires all Michigan employers to have a copy of the poster “*Michigan Safety and Health Protection On The Job*” (CET #2010) displayed in a conspicuous location. The poster must be located in an area accessible to all employees in the facility. More than one poster may be needed in larger facilities.



The poster may be ordered free of charge by calling the MIOSHA Consultation Education and Training Division at 517-284-7720.

Commonly, this poster is found in areas where employees regularly visit (e.g., break rooms, cafeterias, locker rooms) and areas where other federal and state required postings are found (e.g., employment of minors, minimum wage, etc.).

MICHIGAN SAFETY AND HEALTH PROTECTION ON THE JOB

THE MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT, 1974 P.A. 154, AS AMENDED, REQUIRES POSTING OF THIS DOCUMENT IN A CENTRAL AND CONSPICUOUS LOCATION. FAILURE TO DO SO MAY RESULT IN A PENALTY.

The Michigan Occupational Safety and Health Act (MIOSHA)—Act No. 154 of the Public Acts of 1974, as amended—provides job safety and health protection for Michigan employees through the maintenance of safe and healthful working conditions. Under MIOSHA and a state plan approved in September, 1973 by the U.S. Department of Labor, the Michigan Department of Consumer & Industry Services is responsible for administering the Act. Department representatives conduct jobsite inspections and investigations to ensure compliance with the Act and with safety and health standards.

The contents of this poster describe many important provisions of the Act. These provisions apply equally to employers and employees in either private industry or the public sector.

EMPLOYER REQUIREMENTS: MIOSHA requires that each employer:

1. Furnish to each employee employment and a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to the employee;
2. Comply with promulgated rules and standards and with orders issued pursuant to the Act.
3. Post this and other notices and use other appropriate measures to keep his or her employees informed of their protection and obligations under the Act, including the provisions of applicable rules and standards.
4. Notify the Michigan Department of Consumer & Industry Services within 8 hours of any fatality, or the hospitalization of 3 or more employees suffering injury or illness from the same incident. Notification may be accomplished by calling 1-800-858-0397.
5. Make available to employees, for inspection and copying, all medical records and health data in the employer's possession pertaining to that employee.

COMPLAINTS: Employees and employee representatives who believe that an unsafe or unhealthful condition exists in their workplace have the right to request an inspection by giving written notice to the Department of Consumer & Industry Services. If a condition exists which may present an immediate danger, the Department should be notified in the most expedient manner without regard to a written notice. The names of complainants will be kept confidential and not revealed upon the request of the employee. Employees also have the right to bring unsafe or unhealthful conditions to the attention of the department representative during the conduct of an inspection or investigation.

The Act provides that employees may not be discharged or in any manner discriminated against for filing a complaint or exercising any of their rights under the Act. An employee who believes he or she has been discriminated against may file a complaint with the Michigan Department of Consumer & Industry Services within 30 days of the alleged discrimination.

The U.S. Department of Labor is monitoring the operation of the Michigan occupational safety and health program to assure the effective administration of the state act. Any person may make a written complaint regarding the state administration of the state act directly to the Regional Office of OSHA, 230 South Dearborn, Chicago, Illinois 60604.

CITATIONS: If upon inspection or investigation the Department of Consumer & Industry Services believes that a requirement of the Act has been violated, a citation alleging such violation and setting a time period for correction will be issued to the employer. The citation must be prominently posted at or near the place of the alleged violation for three days or until the violation is corrected, whichever is later.

The Act provides for first instance penalties of up to \$7,000 for a violation. Penalties of up to \$7,000 per day may be assessed for failure to correct a violation within a proposed abatement period. Any employer who willfully or repeatedly violates the Act may be assessed penalties of up to \$70,000 for each such violation. Employers may appeal the alleged citation, the proposed penalties or the abatement periods to the Department and to the Board of Health and Safety Compliance and Appeals. Employees may appeal the

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CHAPTER 15: MIOSHA Recordkeeping

15.1 Injury and Illness Record Keeping

If your facility employs ten or more persons at any given time during the calendar year, you are required to maintain a "Log and Summary" (MIOSHA 300) and "Supplementary Record" (MIOSHA 301) of occupational injuries and illnesses in the workplace beginning the following calendar year under the [MIOSHA Administrative Rules - Part 11, Recording and Reporting of Occupational Injuries and Illnesses](#). If you have ten or fewer employees and are notified that you have been selected to participate in the annual survey, you will have to maintain records for the period of time identified. Employers in select Standard Industrial Classification (SIC) Codes are partially exempt from maintaining a log unless specifically asked to do so by MIOSHA. For a complete listing of partially exempt industries, please refer to Appendix A of the standard.

- **MIOSHA 300** is a single log of the occupational injuries and illnesses experienced by employees at your establishment.
- **MIOSHA 301** is a supplementary record to MIOSHA 300 and is required to supply additional information on all recordable injuries and illnesses.

In This Chapter...

- 15.1 – Injury and Illness Record Keeping
- 15.2 – What Must be Recorded
- 15.3 – The Difference between First Aid and Medical Treatment
- 15.4 – Reporting Fatalities and Catastrophes
- 15.5 – Employee Medical Records and Trade Secrets

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An employer can use any other forms that contain the same information as the **MIOSHA 300** and **MIOSHA 301**. Computer software capable of generating a printout of the same information as the **MIOSHA 300** and **301** is acceptable (if the forms are equivalent).

The employer must post the "*MIOSHA Form 300A*," a summary of work related injuries and illness for the previous calendar year, no later than February 1 and keep it in place until April 30. Usually, the 300A Summary Log is posted near the "*Michigan Safety and Health Protection on the Job*" poster (CET 2010).

The log and summary must be established on a calendar year basis and retained and maintained for five years. The records must be made available for MIOSHA inspections and to any employee, former employee, or their representative.

Guidelines for distinguishing between medical treatment and first aid, and forms for injury and illness recordkeeping, may be obtained from the MIOSHA, Consultation Education and Training Division or Management Information Systems Section.

15.2 What Must Be Recorded

According to R 408.22109 (Rule 1109), each employer that is required to keep records of fatalities, injuries, and illnesses must record each fatality, injury, and illness that involves all of the following:

- Is work-related.
- Is a new case.
- Meets one or more of the general recording criteria of R 408.22112 or the application to specific cases of R 408.22113 through R 408.22120.

According to R 408.22112 (Rule 1112), employers must consider an injury or illness to meet the general recording criteria, and therefore be recordable, if it results in any of the following:

- Death
- Days away from work
- Restricted work or transfer to another job
- Medical treatment beyond first aid
- Loss of consciousness

You must also consider a case to meet the general recording criteria if it involves a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in the above-listed criteria.

Determination of Work-Relatedness

According to R 408.22110 (Rule 1110), employers must consider an injury or illness to be work-related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravate a pre-existing injury or illness. Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the work environment, unless an exception in Rule 1110(2)(b) specifically applies.

Travel Status

How do I decide whether an injury or illness is work-related if the employee is on travel status at the time the injury or illness occurs? Injuries and illnesses that occur while an employee is on travel status are work-related if, at the time of the injury or illness, the employee was engaged in work activities "in the interest of the employer." Examples of such activities include travel to and from customer contacts, conducting job tasks, and entertaining or being entertained to transact, discuss, or promote business (work-related entertainment includes only entertainment activities being engaged in at the direction of the employer).

Injuries or illnesses that occur when the employee is on travel status do not have to be recorded if they meet any of the exceptions listed below[Rule 1110(2)(f)].

R 408.22110(2)(f)	If the employee has:	You may use the following to determine if any injury or illness is work-related.
(i)	Checked in to a hotel or motel for one or more days.	When a traveling employee checks into a hotel, motel, or other temporary residence, he or she establishes a "home away from home." You must evaluate the employee's activities after he or she checks into the hotel, motel, or other temporary residence for his or her work-relatedness in the same manner as you evaluate the activities of a non-traveling employee. When the employee checks into the temporary residence, he or she is considered to have left the work environment. When the employee begins work each day, he or she re-enters the work environment. If the employee has established a "home away from home" and is reporting to a fixed work site each day, you also do not consider injuries or illnesses work-related if they occur while the employee is commuting between the temporary residence and the job location.
(ii)	Taken a detour for personal reasons.	Injuries or illnesses are not considered work-related if they occur while the employee is on a personal detour from a reasonably direct route of travel, that is, has taken a side trip for personal reasons.

Telling the Difference between Occupational Injuries and Illnesses

According to R 408.22107, occupational injury is a result of a work accident or from an exposure involving a single incident in the work environment and includes cases such as, but not limited to, a cut, fracture, sprain, or amputation. Occupational illnesses include both acute and chronic illnesses, such as, but not limited to, skin disease, respiratory disorder, or poisoning.

Note: Injuries and illnesses are recordable only if they are new, work-related cases that meet one or more of the recording criteria discussed earlier.

15.3 The Difference between First Aid and Medical Treatment

Medical treatment is the management and care of a patient to combat disease or disorder. For the purposes of MIOSHA record keeping and reporting of occupational injuries and illnesses, medical treatment does *not* include any of the following:

- Visits to a physician or other licensed health care professional solely for observation or counseling.
- Conducting diagnostic procedures, such as x-rays and blood tests, including the administration of prescription medications used solely for diagnostic purposes, e.g. drops to dilate pupils.

Though not applicable in every situation, the following examples could be considered under these categories:

First Aid (one-time observation or treatment - can be professionally administered):

- Use of eye patches
- Tetanus immunization
- Hot or cold therapy

Medical Treatment (professional medical treatment):

- Prescription and non-prescription medicine used at prescription strength
- Physical therapy and chiropractic treatment
- Sutures, staples, other wound-closing devices (e.g., glue)

15.4 Reporting Fatalities and Catastrophes

As an employer, you are required to notify the Michigan Department of Licensing and Regulatory Affairs, MIOSHA, within eight hours of a fatality or any in-patient hospitalization of three or more employees suffering an injury or illness from a single incident. MIOSHA Fatalities or Catastrophes: 1-800-858-0397.

15.5 Employee Medical Records and Trade Secrets

The MIOSHA General Industry Occupational Health Standards - Part 470, Employee Medical/Exposure Records ([R 325.3451-3475](#)) requires that all employee medical records be maintained for a minimum of 30 years after their last year of employment. These records include:

- Medical and employment questionnaires or histories, including job descriptions and occupational exposures.
- Results of replacement, periodic, or episodic medical examinations and laboratory tests, including x-ray examinations and all biological monitoring.
- Medical opinions, diagnoses, progress notes, and recommendations.
- Description of treatments and prescriptions, including first aid records.
- Employee medical complaints.
- Death certificates.

Generally, employee exposure records must be maintained for not less than 30 years. Specific exceptions are noted in the standard. Employee exposure records include:

- Work place environmental monitoring or measuring, including personal, area, grab, wipe, or other forms of sampling, and related collection and analytical methodologies, calculations, and other background data relevant to the interpretation of the results obtained.
- Biological monitoring results that directly assess the absorption of a substance or agent by body systems, such as the level of a chemical in the blood, urine, breath, hair, or fingernails, but not including results that assess the biological effect of a substance or agent.
- Safety data sheets.
- In the absence of information identified in the three above, any other record, such as chemical, common, or trade name, that reveals the identity of a toxic substance or harmful physical agent.

Records can be kept in any location that is accessible within 15 working days or less of request for such information. Please refer to the rules for further information pertaining to recordkeeping access and trade secrets.

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CHAPTER 16: Personal Protective Equipment

When you are unable to eliminate a work place hazard through engineering changes or safeguarding, MIOSHA requires that you provide personal protective equipment (PPE) to employees who have the potential of being exposed to hazards. Equipment must be provided at no expense to employees when specified by a MIOSHA standard. Employers must also replace equipment when needed due to wear and tear or when the equipment is lost due to the work environment.



Rules specifying when and the types of personal protective equipment needed are included in both MIOSHA health and safety rules. The “[MIOSHA General Industry Safety Standards – Part 33, Personal Protective Equipment](#)” and the “[MIOSHA General Industry Occupational Health Standards – Part 433, Personal Protective Equipment \(R 325.60001-600011\)](#)” may be ordered from the Michigan Department of Licensing and Regulatory Affairs, MIOSHA.

16.1 Hazard Assessment

As an employer, you must assess your work place to determine if there are hazards present that make the use of personal protective equipment necessary. If hazards are present or likely to be present, then the employer must do ALL of the following:

- Select and have employees use the types of PPE required to protect them from the hazards identified.
- Inform each affected employee about the decisions regarding selection of PPE.
- Select the PPE that properly fits each employee.

You must certify in writing that the hazard assessment was completed by creating a written document to serve as certification of the hazard assessment and provide the following information:

- The work place evaluated (i.e., name and address of your business).
- The person certifying that the evaluation has been performed.
- The date of the hazard assessment.

In This Chapter:

- 16.1 – Hazard Assessment
- 16.2 – Training
- 16.3 – Retraining
- 16.4 – Face and Eye Protection
- 16.5 – Foot Protection
- 16.6 – Hand Protection
- 16.7 – Respirators



You can download guidance materials for this standard at the following Web site www.michigan.gov/miosha (select “Publications, Forms & Media” then “General Industry Safety Publications”).

16.2 Training

It is not enough to just provide your employees with personal protective equipment. You must also train all employees who use personal protective equipment in the following:

- When and why PPE is necessary.
- The type of PPE necessary to fit the job duty.
- How to correctly put on, take off, adjust, and wear needed PPE.
- The limitations of the equipment.
- The useful life of the equipment, as well as the proper care, maintenance, and disposal of the equipment.

Before allowing employees to use personal protective equipment they must be trained on all of the above. Be sure they can show you they understand how to put on and use the equipment and that they understand proper use, care, and limitations of the PPE.

16.3 Retraining

Retrain your employees any time you believe an employee is not knowledgeable or does not have the skill or understanding needed to use the personal protective equipment. Also, retrain if any of the following occurs:

- Changes in the work place that make previous training outdated.
- Changes in the types of PPE used, thereby making previous training outdated.
- When an affected employee's knowledge or use of assigned PPE appears to indicate the employee has not retained the understanding or skills necessary.

Maintain written certification of employee training by including:

- Name of each employee trained.
- Date(s) of training.
- Subjects covered by the training.

16.4 Face and Eye Protection

Manufacturing industry employees may require face and eye protection based on the duties assigned to them. Generally, face and eye protection must be provided to employees if hazards exist due to the following exposures:

- Flying objects or particles
- Molten metal
- Liquid chemicals
- Acids or caustic liquids
- Chemical gases or vapors

- Glare
- Injurious radiation
- Electrical flash
- Any combination of the above hazards

16.4.1 Face and Eye Protector Selection

MIOSHA General Industry Safety Standards – Part 33, Personal Protective Equipment, contains guidance for selecting the appropriate protective equipment.



When selecting eye protection, consider the following requirements:

- If there is a hazard from flying objects, side shields are required.
- Hardened or plastic contact lenses meeting the Federal Food and Drug Administration standard are not considered eye protection in occupational settings. They are manufactured to lesser strength and other specifications than those manufactured to American National Standards Institute (ANSI) standard specifications.

Face or eye protection must also meet the following minimum requirements:

- Provide protection against the particular hazards for which it is designed.
- Fit snugly and not unduly interfere with the employee's movements.
- Capable of withstanding sanitizing.
- Marked distinctly to identify the manufacturer.

16.4.2 Maintenance of Face and Eye Protection

All face and eye protectors must be kept clean and in good repair. Cleaning facilities for the protectors must be kept away from the hazard, but readily accessible to the wearer.

Replace headbands of goggles and shields when they become slack, worn out, sweat-soaked, knotted, or twisted.

A face or eye protector is for individual use only; if it is necessary to reissue a face or eye protector, it must be thoroughly cleaned, sanitized, and in good condition.

16.5 Foot Protection

If there is a potential for foot injuries due to falling or rolling objects or a danger of objects piercing the sole of the shoe, employees must wear protective footwear.

If you have a process that could create a hazard due to absorption or physical contact by the feet, then footwear such as boots, overshoes, rubbers, wooden-soled shoes, or their equivalent must be used.

16.6 Hand Protection

In general, provide employees with hand protection if they are exposed to any of the following hazards:

- Skin absorption of harmful substances
- Severe cuts or lacerations
- Severe abrasions
- Punctures
- Chemical burns
- Thermal burns
- Harmful temperature extremes



Consider the following when selecting hand protection for use in your establishment:

- The task to be performed.
- Conditions present.
- Duration of use.
- The hazards and potential hazards identified. Frequent skin contact with solvents is the most likely cause of dermatitis in the manufacturing industry.
- The interior of the hand protection must be kept free of corrosive or irritating substances.
- Hand protection must be sanitized before being reissued.

Examples of the types of hazards that require hand protection by employees of manufacturing establishments include the need for gloves during part cleaning operations by maintenance personnel. Always consult your material safety data sheets to see if the products you are using require glove usage.

CAUTION! Supervise and train all employees to NEVER wear gloves if they have any possibility of coming into contact with inrunning pinch points, rotating parts, or are working around automated equipment. If the above hazards to the hands are present and employees must work around moving parts, then the physical hazards must be guarded. Also train them on these safe work practices:

- ✓ Wear short-sleeve shirts or roll up long sleeves.
- ✓ Remove jewelry before beginning work.
- ✓ Never override an engineering control or operate a machine with a guard removed.
- ✓ Secure and restrain long hair.

16.7 Respirators

The [MIOSHA General Industry Occupational Health Standard – Part 451, Respiratory Protection \(R 325.60051 and 29 CFR 1910.134\)](#) applies to all employers whose employees are required to wear respirators for protection against overexposure to air contaminants or in emergency situations. The standard requires the employer to establish and maintain an effective respirator program:



- Develop a worksite specific written program discussing selection, issuance, use, and care of respirators. The program should include a hazard assessment and it should identify the program administrator's responsibilities.
- Train employees in the proper use and limitations of respirators. Often employees use inappropriate protection because they have not been informed of the limitations of the equipment. For example, if disposable dust masks are made available to employees, it must be stressed that these respirators are useless for any of the various solvents found throughout the facility.
- Ensure that all respirators used in the work place, whether supplied by the employer or the employee (for personal use), are approved or accepted by the National Institute for Occupational Safety and Health.
- Provide annual fit testing, not to be confused with a fit check, to all employees who are required to wear negative or positive pressure respirators which rely upon a tight fitting face piece to face seal.

Medical surveillance of employees required to wear respiratory protection is required to ensure they are physically capable of wearing the device.

Special provisions apply if you have air-supplied respirators (air line or self-contained breathing apparatus) to ensure function of the equipment and quality of the air supplied. This regulation also addresses the use of respirators for emergencies.

Additionally, all employees who wear respirators that have a tight-fitting face piece, meaning the respirator contacts the surface of the skin, must not let anything (i.e., facial hair such as beards and long goatees, sideburns and mustaches, skullcaps and temple pieces on eyeglasses) interfere with the sealing surface of the respirator! You are strongly encouraged to include and enforce a policy which addresses this issue in your respirator program when these types of respirators are used in the workplace.

Copies of materials that help employers develop written respirator programs and train employees may be obtained from the MIOSHA, Consultation Education and Training Division. **DVD's** (for generic training of employees in the use and limitations of respirators) can be borrowed from the [Safety & Health DVD/Video Library Service](#).

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CHAPTER 17: Process Safety Management of Highly Hazardous Chemicals

The [MIOSHA General Industry Safety Standards - Part 91, Process Safety Management of Highly Hazardous Chemicals](#) and [General Industry Occupational Health Standards - Part 591 \(R325.18301-18302\)](#), adopted by reference the federal standards 29 CFR 1910.119 and 1910.109.



This standard contains requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. These releases may result in toxic, fire, or explosive hazards. The standard applies to all work places with processes involving Highly Hazardous chemicals at or above specified threshold quantities. Regulated employers include manufacturers of bulk and specialty chemicals, solvent based paints and coatings, adhesives, pharmaceuticals, pulp and paper processors, agricultural chemicals, and public water treatment facilities. The standard also applies when keeping, having, storing, manufacturing, selling, transporting, and using explosives, blasting agents, and pyrotechnics. These rules do not apply to the sale and use (public display) of pyrotechnics, commonly known as fire works, or to the use of explosives in the form prescribed in the official United States pharmacopoeia. Compliance with the standard typically requires the involvement of specially trained Industrial Hygienists, Safety Professionals or Professional Engineers. Contact MIOSHA Consultation Education & Training division for assistance at 517-284-7720.

17.1 Elements of Process Safety Management

There are 14 principal elements to this standard:

- Employee participation
- Mechanical integrity
- Process safety information
- Hot work permit
- Process hazard analysis
- Management of change
- Operating procedures
- Incident investigation
- Training
- Emergency planning and response
- Contractors' obligations
- Compliance audits
- Pre-start-up safety review
- Trade secrets



For more information about the Process Safety Management of Highly Hazardous Chemicals, contact the MIOSHA at 517-322-1608.

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CHAPTER 18: Permit-Required Confined Spaces

The [MIOSHA General Industry Safety Standards - Part 90, Permit-Required Confined Spaces](#) and [General Industry Occupational Health Standards - Part 490 \(R 325.63001\)](#) provide rules that establish minimum requirements for the practices and procedures to protect employees from the hazards associated with entry into permit-required confined spaces. These rules do not apply to agriculture, construction, and shipyard employment.

The standard requires the employer to:

- a. Evaluate the workplace to determine if it contains any permit-required confined spaces (PRCS).
- b. If PRCSs are found, the employer must inform employees of the existence, location, and danger posed by these spaces. Place "**Danger Confined Space**" stickers at these locations.
- c. If employees are not to enter PRCSs, the employer must take steps to prevent entry (i.e., postings, locks, etc.).
- d. If employees will enter PRCSs, the employer must develop and implement a written permit space entry program that complies with the standard. Persons acting as entrants, attendants, and entry supervisors must be trained according to the standard.

A confined space meets all of the following criteria:

- a. It is large enough and so configured that an employee can bodily enter and perform assigned work.
- b. It has limited or restricted means for entry or exit (i.e., tanks, vessels, silos, storage bins, hoppers, vaults, pits, etc.).
- c. It is not designed for continuous human occupancy.

A PRCS has one, or more, of the following characteristics:

- a. It contains or *has a potential to contain* a hazardous atmosphere.
- b. It contains a material that has the potential for engulfing the entrant (i.e., liquids, grain, sand, coal, etc.).
- c. It has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or a floor which slopes downward and tapers to a smaller cross-section.
- d. It contains any other recognized serious safety or health hazard.

Entry into PRCSs may be undertaken by (1) following a complete permit entry program, (2) using alternate entry procedures, or (3) declassifying to a non-permit space.

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Permit Entry - If atmospheric, engulfment, and/or mechanical hazards in the PRCS cannot be eliminated and/or controlled prior to entry, a complete permit entry program must be followed. Refer to the standard for a complete description of a permit entry program. I

Alternate Entry - If the only hazard in the space is an actual or potential atmospheric hazard that can be controlled through continuous forced air ventilation, the alternate entry procedures can be used. The employer must certify alternate entry conditions in writing.

De-classified - A PRCS can be reclassified as a non-permit space only if the employer certifies in writing that all hazards in the space are eliminated without entering the space. Such a space is considered reclassified as a non-permit space until such time as the conditions change or hazards are introduced into the space.

If you have confined spaces, we strongly encourage you to obtain a copy of the standard and evaluate the spaces to determine if they are PRCSs. If you need assistance, contact the MIOSHA Consultation Education & Training Division 517-284-7720.

SECTION TWO – MIOSHA REGULATIONS

PART 1: COMMON REGULATIONS FOR SAFETY AND HEALTH

CHAPTER 19: Spray Finishing Operations



The [MIOSHA General Industry Safety Standard - Part 76, Spray Finishing using Flammable and Combustible Materials](#) was amended January 17, 2014. These rules protect Michigan employees from health and safety hazards in the workplace when spray finishing using flammable and combustible materials. On March 26, 2012 the Occupational Safety and Health Administration (OSHA), in the U.S. Department of Labor, revised the Spray Finishing Using Flammable and Combustible Materials for general industry (29 C.F.R. §1910.107), and on September 9, 2009 revised Ventilation for Occupational Safety and Health Standards (29 C.F.R. §1910.94).

The revised R 408.17601 adopts by reference the current version of 29 C.F.R. §1910.107 and 29 C.F.R. §1910.94, in order to be as effective as the Federal OSHA standards. GI Part 76 provides specifications for spray finishing operations. These rules also cover the application of combustible powders by spray guns, electrostatic powder spray guns, fluidized beds, or electrostatic fluidized beds. These rules do **not** apply to outdoor spray application or buildings, tanks, or other similar structures or to small portable spraying apparatus that is not used repeatedly in the same location. The intent of the standard is to prevent fire or explosion caused by unintentionally igniting flammable or combustible sprayed materials.

As an employer, you must provide training to each assigned employee regarding the operation, maintenance, hazards, and safeguards of the job covered by these rules.

Smoking must be prohibited and "**No Smoking**" signs must be posted in the vicinity of all areas related to spray finishing and dip tanks. The smoking restriction must extend 20 feet from the area.

These rules define spray finishing operations, maintenance of spray finishing areas, design and construction of spray booths/rooms, and ventilation requirements. Copies of the Strike Bold Draft and the Revised Standard are available on the MIOSHA Standards website and below:

- GI Part 76 Spray Finishing Using Flammable and Combustible Materials Strike Bold Draft
- GI Part 76 Spray Finishing Using Flammable and Combustible Materials Standard

Some of the highlights of the rules are as follow:

Design and Use

- Spraying must be conducted in a designated spraying area.
- All spraying areas must be maintained so that the build-up of deposits of combustible residues does not create a hazard.
- Tools that are used for cleaning purposes must be made of non-sparking material.

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- Solvents used for cleaning must have flashpoints greater than 100 degrees Fahrenheit, unless they are used for cleaning nozzles and auxiliary equipment inside of the spray booth with the ventilation equipment operating.
- Spray booths must be constructed of noncombustible materials.
- The interior surfaces of spray booths must be smooth and continuous without edges to prevent the build-up of residues and to make cleaning easier.
- When spraying areas are illuminated through glass panels or other transparent materials, only fixed lighting units can be used as a source of illumination. Panels must be made of a noncombustible material which will not break, causing a hazardous condition.
- A clear space of not less than three feet on all sides of a spray booth must be kept free from storage of combustible material.
- A closed container, an approved portable tank, an approved safety can, or properly arranged system of piping must be used for bringing flammable or combustible liquids into a spray finishing room.
- When flammable or combustible liquids are transferred from one container to another, both containers must be bonded and grounded to prevent discharge sparks of static electricity.
- No electrical equipment is allowed in any spraying area, unless it is specifically approved for those locations.
- Portable electric lamps may not be used in any spraying area during spraying operations.
- All areas used for spraying, including the interior of the booth, need to be protected by automatic sprinklers where this protection is available. Where not available, other automatic extinguishing equipment shall be provided.

Ventilation

- Ventilation systems to remove flammable vapors and confine overspray residue to the spray area must be provided and used. The spraying operations must be designed, installed, and maintained so that the average air velocity over the open face of the booth is not less than 100 linear feet per minute.
- Visible gauges, audible alarms, or pressure activated devices must be installed to indicate or ensure that the required air velocity is maintained.
- Clean fresh make-up air must be supplied to a spray booth/room in quantities equal to the volume of air exhausted through the spray booth/room.
- In areas where the outdoor temperature may be expected to remain below 55 degrees Fahrenheit for extended periods of time, the make-up air must be heated, except where adequate and safe means of radiant heating for all operating personnel affected is provided.
- If the make-up air is filtered, a pressure gauge must be installed to show the pressure drop across the filters. This gauge must be marked to show the pressure drop at which the filters require cleaning or replacement.
- The spray system shall be interlocked with the ventilation system.

Please refer to Chapter 34: Flammable and Combustible Liquids for more information on the proper storage and handling of these types of materials.

If you require employees to wear respirators while working in spray finishing operation, please refer to Chapter 16.8 "Respiratory Protection."