

Parts 42, 92, and 430 -Hazard Communication and Right-To-Know Requirements for General Industry and Construction

Student Materials MTI Level Two Compliance Course Consultation Education and Training Division Michigan Occupational Safety and Health Administration Michigan Department of Labor and Economic Opportunity www.michigan.gov/miosha 517-284-7720





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Parts 42, 92, and 430 Hazardous Communication Act 154: Labeling/Posting and SDS

Presented By: Consultation Education and Training Division Michigan Occupational Safety and Health Administration Michigan Department of Labor and Economic Opportunity www.michigan.gov/miosha 517-284-7720









The Beginning: Act 154 and Michigan's Right To Know Law

Michigan Public Act 154 Michigan Occupational Safety and Health Act

Employer to furnish a place of employment which is "free from recognized hazards" (a.k.a The General Duty Clause)



Act 154 Requirements: Section 14(c) - Pipes and Pipe Labeling

Label or identify pipes/piping systems: label or a sign,

placard,

process sheet,

batch ticket,

written operating instruction, or

a substance identification system.



Act 154 Section 14(c) – Pipe Labeling

Labels or identification methods:

- Placed where employee exposure may be most likely will occur
- No size or specific distance between labels required
- Should be highly visible
- Alternative notification methods (other than labeling) must be readily accessible to each employee
- ASME A13.1-2007 (R2013) Scheme for the Identification of Piping Systems
- ANSI Z535.1-2006 (R2011) Safety Colors

Employees must be able to recognize what identification system the employer uses.

Act 154 Section 14(c) – Pipe Labeling: ANSI EXAMPLE



Yellow with Black Lettering - flammable liquids and gasses Green with White Lettering - potable water Blue with White Lettering - compressed air Red with White Lettering - fire quenching fluids Orange with Black Lettering - toxic or corrosive fluids Brown with White Lettering - combustible fluids Other colors determined by the facility

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Act 154 Section 14(c) – Pipe Labeling: ANSI Pipe Label Placement

Recommendations for label placement:

Labels clearly visible from the normal angle of approach

Near all valves and flanges

Adjacent to changes in direction

Both sides of floor/wall penetrations

At regular intervals on straight runs of pipe; at least one label every 50 feet throughout the piping run





This Workplace		As Required by Michigan	the Nov	u or De	wicod
by the		Right To	Nev	N OI RE	viseu
Michigan	SDS(s) For This	TO BE POSTED THEOUGHOUT THE WORKPLACE MEXT TO THE SAFETY GATA SH	CETS (505)	SDS	5
Right To Know Law	Located At	New or Revised	Receipt Date	Posting Date	Location of New or Revised SDS
Employers must make available for employees in a readily accessible manner, Safety Data Sheets (SDS) for those hazardous chemicals in their workplace.					
Employees cannot be discharged or discriminated against for exercising their rights including the request for information on harandrous chemicals	Location(s)				
Employees must be notified and given direction (by employer posting) for locating Safety Data Sheets and the receipt of new or revised SDS(s).	Location(s)				
When the employer has not provided a SDS, employees may request assistance in obtaining SDS from the:	Person(s) responsible for SDS(s)		·		
Michigan Department of Licensing and Regulatory Affains Michigan Occupational Sofety & Health Administration General Industry Safety & Health Division	Phone	LICENSING AND RESULATORY APPARES			S.













(b) Scope and Application – Examples of covered chemicals and products:

- Bricks
- Metal ingots
- Wood products where the hazard is not just combustion - wood sawdust creates a respiratory hazard
- Hazardous drugs not in final form or a solid - drugs that are crushed or dissolved prior to administration
- Combustible dusts

- Simple asphyxiants
- Welding rods/wire
- Acid batteries
- Consumer products not used in the quantities and the manner that a consumer would use them
- Oil and gas products; the producers are considered manufacturers under the Haz Com

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Establish workplace program Communicate information to employees

(b) Scope and Application – Partial Exemptions: Lab

Laboratories only requirements:

- Maintain labels on incoming containers.
- Maintain any SDS received with incoming shipments of hazardous chemicals.
- Ensure SDS are readily accessible.
- Provide info and training to laboratory employees.

When lab makes and ships products out of the lab, the lab would be considered a manufacturer.

Refer to Part 431. Hazardous Work in Laboratories Standard.

Note: Laboratories subject to MIOSHA Part 431 are <u>NOT</u> required to follow MIOSHA Part 42, 92 or 430 Hazard Communication.







Hazardous wastes are covered by EPA regulations

Tobacco and tobacco products

Wood/wood products which will not be processed

Articles in general, partial

Food, alcohol, cosmetics, drugs sold to consumers and personal use

Consumer products (depends on use)

Nuisance particulates that pose **no** hazard

Ionizing and nonionizing radiation

Biological materials





















- a) Purpose
- b) Scope and Application
- c) Definitions
- d) Hazard Classification
- e) Written Haz Com Program
- f) Labels and Other Forms of Warning

- g) Safety Data Sheets
- h) Employee Information and Training
- i) Trade Secrets
- j) Effective Dates
- k) Appendices A-F





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(d) Hazard Classification: Health

Health Hazards							
Hazard Class	Hazard Category						
Acute toxicity	1	2	3	4			
Skin Corrosion/Irritation	1A	1B	1C	2			
Serious Eye Damage/Eye Irritation	1	2A	2B				
Respiratory or Skin Sensitization	1						
Germ Cell Mutagenicity	1A	1B	2				
Carcinogenicity	1A	1B	2				
Reproductive Toxicity	1A	1B	2	Lactation			
Specific Target Organ Toxicity – Single Exposure	1	2	3				
Specific Target Organ Toxicity – Repeated Exposure	1	2					
Aspiration	1						
Simple Asphyxiants	Sing	e Cate	egory				

(d) Hazard Classification: Health Categories

Hazard Classes are divided into hazard categories. *Hazard Categories* states severity within the class.

Exar	mple - Acu	te Toxicity Hazaro	d Categories	
Exposure Route	Cat. 1	Cat. 2	Cat. 3	Cat. 4
Oral (mg/kg)	<u><</u> 5	> 5 and <u><</u> 50	> 50 and <u><</u> 300	> 300 and <u><</u> 2000
Dermal (mg/kg)	<u><</u> 5	> 50 and <u><</u> 200	> 200 and <u><</u> 1000	> 1000 and <u><</u> 2000
Inhalation – Gases (ppmV)	<u><</u> 100	> 100 and <u><</u> 500	> 500 and <u><</u> 2500	> 2500 and <u><</u> 20000
Inhalation – Vapors (mg/l)	<u><</u> 0.5	> 5 and <u><</u> 2.0	> 2.0 and <u><</u> 10.0	> 10.0 and <u><</u> 20.0
Inhalation – Dusts and Mists (mg/l)	<u><</u> 0.05	> 0.05 and <u><</u> 0.5	> 0.5 and <u><</u> 1.0	> 1.0 and <u><</u> 5.0



(d) Haza	(d) Hazard Classification: Physical						
Physical Hazards							
Hazard Class	Hazard Category						
Explosives	Unstable Explosives	Div 1.1	Div 1.2	Div 1.3	Div 1.4	Div 1.5	Div 1.6
Flammable Gases	1	2					
Flammable Aerosols	1	2					
Oxidizing Gases	1						
Gases under Pressure Compressed gases Liquefied gases Refrigerated liquefied gases Dissolved gases	1						
Flammable Liquids	1	2	3	4			
Flammable Solids	1	2					
Self-Reactive Chemicals	Type A	Type B	Type C	Type D	Type E	Type F	Type G
Pyrophoric Liquids	1						
Pyrophoric Solids	1						
Pyrophoric Gases	Single Category						
Self-Heating Chemicals	1	2					
Chemicals in which contact with water emit flammable gases	1	2	3				
Oxidizing Liquids	1	2	3				
Oxidizing Solids	1	2	3				
Organic Peroxides	Type A	Type B	Type C	Type D	Type E	Type F	Type G
Corrosive to Metals	1						
Combustible Dust	Single Category						

(d) Hazard Classification:
Physical Categories

Example – Flammable Liquids Hazard Categories

	Cat. 1	Cat. 2	Cat. 3	Cat. 4
Flash Point	< 73 F (23°C)	< 73 F (23°C)	≥ 73 F (23°C) and ≤ 140°F (60°C)	>140°F (60°C) and ≤ 200°F (93°C)
Initial Boiling Point	≤ 95°F (35°C)	> 95°F (35°C)	N/A	N/A

(d) Hazard C Ref	lassification – fer to Append	Carcinogens
Part D. Table Relating A RoC, and GHS Carcinog	approximate Equivale enicity Classification	ences among IARC, NTF s
Approximate Equivale	nces Among Carcinoge	n Classification Schemes
IARC	GHS	NTP RoC
Group 1	Category 1A	Known
Group 1 Group 2A	Category 1A Category 1B	Known
Group 1 Group 2A Group 2B	Category 1A Category 1B Category 2	Known Reasonably Anticipated







Review Results Activity 2

What were the categories identified for each health hazard classification? What was the category identified for the physical hazard classification?

(e) Written Hazard Communication Program

<u>Develop</u>, <u>implement</u>, and <u>maintain</u> at each workplace, a written Haz Com program to include:

- Labels and other forms of warning
- SDSs
- Information and training
- List of chemicals
- Non-routine tasks
- Contents of pipes conveying hazards
- Multi-employer worksites
- Program must be site specific
- Written program must be available to employees or their representative



(e) Written Hazard Communication Program: List of Hazardous chemicals

Have you done a physical inventory?

Compared the inventory to purchasing documents?

Compare to MSDS/SDS on file?

Have you determined if there are any consumer products used the same way and quantity as in a household? If used differently or greater quantity, MUST have SDS and included in the Haz Com Program.

Include the list of chemicals in the program and may also be used as an index to the MSDS/SDS book, file or electronic folder.

(e) Written Hazard Communication Program – Multi-Employer Worksites

Employers who:

Produce, Use, or

Store hazardous chemicals at a workplace

In such a way that the employees of other employer(s) may be exposed.

Example: Contractors that perform janitorial services

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(e) Written Hazard Communication Program – Multi-Employer Worksites

Multi-Employer worksites document methods used to:

- Provide onsite access to SDSs
- Inform other employers/employees of precautionary measures:
 - During normal operations
 - During foreseeable emergencies
- Inform other employers/employees of workplace labeling system used



(f) Labels and other forms of warning There are three types of containers described in the Haz Com Standard: •Shipped Containers or original manufacturer's container •Workplace Containers or secondary containers

•Portable Containers or transfer/personal use containers

Each have specific requirements and exceptions.



(f) Labels and other forms of warning

Shipped containers to be labeled with:

- Product identifier
- Signal word
- Hazard Statement
- Pictograms
- Precautionary Statements
- Responsible party





(f) Labels and other forms of warning -Hazard Statements Hazard statements describe the hazards associated with a chemical. Examples: Flammable liquid and vapor Causes skin irritation

• May cause cancer







	"Wear Respirate	ory Protection"
Haza	Statement in Haz C	spirator Precautionary Com Standard
Hazard Class	Hazard Category	Precautionary Statement
Acute Toxicity Inhalation	Category 1	Prevention: [In case of inadequate ventilation] wear respiratory protection (Appendix C.4.3)
Acute Toxicity Inhalation	Category 2	Prevention: [In case of inadequate ventilation] wear respiratory protection (Appendix C.4.3)
Sensitization Respiratory	Category 1 (Including both sub-categories	Prevention: [In case of inadequate ventilation] wear respiratory protection











Pie	ctograms D	efined (c	ontinued)	
Example: Labe	l Information for	Flammable Li	quids	
Fable 3: GHS Label Ele	ements for Flammable (and	l Combustible) Liquid	s	
	Category 1	Category 2	Category 3	Category
Symbol				No symbo
Signal Word	Danger	Danger	Warning	Warning
Hazard Statement	Extremely flammable liquid and vapor	Highly flammable liquid and vapor	Flammable liquid and vapor	Combustib liquid




















(f) Workplace/Secondary Container Labels

Excerpt from the Haz Com Standard:

(6) Workplace labeling. Except as provided in paragraphs (f)(7) and (f)(8) of this section, the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with **either**:

(i) The information specified under paragraphs (f)(1)(i) through (v) of this section for labels on shipped containers [GHS Label]; **or**,

(ii) Product identifier **and** words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the Haz Com program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical [e.g. HMIS, NFPA or other label system].

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No conflicting hazard warnings or pictograms.

May use written materials (e.g., signs, placards, etc.) in lieu of affixing labels to individual stationary process containers.

HEALTH

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Employer can use GHS compliant labels (same as shipping). <u>HMIS Label</u> NFPA Label



(f) Labels and Other Forms of Warning - Workplace Labeling for Workplace/Secondary Containers: Example



Product identifier/chemical name

Use Haz Com/GHS pictograms from the manufacturer's container to represent the hazards







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Oh where, oh where have the labels gone?

Avoid using food containers for chemicals



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Portable Container or Transfer/Personal Use Container

What is a portable or transfer/personal use container?

Container that is used by an employee to transfer chemical from the original container and intended for immediate use by that employee.

Examples:

Mop bucket

Windshield washer fluid at motor pool

Hydraulic oil dispensed from a drum



Note: Cannot be "abandoned" with chemical inside or given to another employee to use.

Objective 3

Classify chemicals using the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) using the appendices of the Haz Com Standard.









Review Results from Activity 3B

What is the name of the product (Product Identifier)?Who is the manufacturer (Supplier ID)?What are the Hazard Statements?What pictogram(s) should appear on the label?What signal word(s) should appear on the label?



Minor Difference: GHS Revision 3 vs 4

An example of a minor change that would not result in a citation would be regarding the precautionary statement for Flammable Aerosols.

HCS uses "Pressurized container: do not pierce or burn, even after use," and

GHS Revision 4 states "do not pierce or burn, even after use."

No citation for using the GHS Rev 4 revised precautionary statement.







What's wrong with this label?

If this is a primary manufacturer's label?

If this is a secondary (workplace) label?





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	What's	s wrong wi	th this labe	?
		Non-Hazar	rdous	-
ARNING STATE used Causes skin burns. H sole causes skin burns. H sole and dusts cause respirat and corrosive to an element an	MENT: EYES: Corrosive to farmful if absorbed through the s atory tract irritation, if inhaled. In o mucous membranes. Nitrite to n is the loss of oxygen-carrying of CHRONIC: Prolonged or rep AUTIONS: Koo	o eyes. May cause severe cornea kin. May cause allergic skin react halation may result in toxic effects ixic effects include intense cyanos capacity of the blood. Aspiration in heated exposures may cause meth	al burns, conjunctivitis, and permai tion. May cause skin sensitization similar to those under INGESTIO is, nausea, vomiting, abdominal p to respiratory tract may injure lung temoglobinemia, damage to the o	nent eye damage. May cause blindness. In some individuals. INHALATION: Mis N. IF SWALLOWED: Harmful or fatal if ain, dizziness, weakness, and convulsion as. OTHER: None known. ACUTE N kygen-carrying capacity of the blood. May











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Employer Responsibility: Maintain MSDS/SDS

If the manufacturer has gone out of business, the employer's responsibility is to maintain the SDS (or MSDS) for that product and not to create a new SDS

Employers may contact manufacturers, importers or distributors of products they have previously ordered from to request new SDSs, and if they do so, the manufacturer or importer must provide the SDS

Must maintain MSDS/SDS received



















Appendices A-F

Appendix A – Health Hazard Criteria (mandatory)

Appendix B – Physical Hazard Criteria (mandatory)

Appendix C – Allocation of Label Elements (mandatory)

Appendix D – Safety Data Sheets (mandatory)

Appendix E – Definitions of "Trade Secrets" (mandatory)

Appendix F – Guidance for the Hazard Classification

Re: Carcinogens (non-mandatory)



Other Standards Affected

The Gibbally Harmonized System of Classification and Labeling of Chemicals

Flammable and Combustible Liquids Spray Finishing using Flammable and Combustible Materials Process Safety Management of Highly Hazardous Chemicals (PSM) Hazardous Waste Operations and Emergency Response (HAZWOPER) Hazardous Work In Laboratories Dipping and Coating Operations Welding, Cutting and Brazing Employee Medical Records and Trade Secrets



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