Hazard Communication Outreach Program

Parts 42, 92, & 430
Act 154: Labeling/Posting & SDS

Presented By:
Consultation Education & Training (CET) Division
Michigan Occupational Safety & Health Administration
Michigan Department of Licensing and Regulatory Affairs
www.michigan.gov/miosha
(517) 284-7720

Agenda

➢ Review updates to MIOSHA’s Hazard Communication Standard (Haz Com) and Act 154
➢ Highlight notable Haz Com changes (1994 vs. 2012)
  • Labels
  • Safety Data Sheets (SDS)
  • Training
➢ Discuss other MIOSHA Standards affected
➢ Review available resources

Why the Change?

➢ To align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) adopted by 67 nations.
➢ To provide a common and coherent approach to classifying chemicals.
Why the Change? (continued)

➢ To improve the quality and consistency of hazard information in the workplace:
  • Reduce confusion & increase in hazard comprehension
  • Facilitate training
  • Help address literacy problems

➢ Other benefits:
  • Reducing international trade barriers and
  • Reduce cost for American businesses who manufacture, import or distribute hazardous chemicals globally.

Who is Affected?

➢ Manufacturers, Distributors, Importers
  • Change SDS information and format
  • Change container labeling

➢ Employers
  Train employees on changes to:
  • SDS
  • Container labels

➢ Employees
  Recognize and understand hazards based on:
  • Information in new SDS format
  • Pictograms on container labels
  • Precautionary and hazard statements

Overview of the Haz Com

Yellow text = Changes in 2012 revised rule

a) Purpose  g) Safety Data Sheets
b) Scope and Application  h) Employee Information and Training
c) Definitions  i) Trade Secrets
d) Hazard Classification  j) Effective Dates
e) Written Hazard Communication Program  Appendices A-F
f) Labels and Other Forms of Warning
Appendices

- Appendix A, Health Hazard Criteria (Mandatory) – NEW
- Appendix B, Physical Hazard Criteria (Mandatory) – NEW
- Appendix C, Allocation of Label Elements (Mandatory) – NEW
- Appendix D, Safety Data Sheets (Mandatory) – NEW
- Appendix E, Definition of “Trade Secret” (Mandatory)
- Appendix F, Guidance for Hazard Classifications Re: Carcinogenicity (Non-Mandatory) – NEW

1910.1200 (a) Purpose

Haz Com 1994
All hazards to be determined.
Comprehensive hazard communication program to transmit information.

Haz Com 2012
All hazards to be classified.
Other provisions the same except statement that rule is consistent with Revision 3 of the GHS.

Source: OSHA Side-by-Side

1910.1200 (c) Definitions

Haz Com 1994
- Includes specific definitions for terms used in the standard as well as all physical hazards.

Haz Com 2012
- Relocated: Physical hazard definitions from paragraph (c) and placed in new Appendix B (e.g. flashpoint, flammable).
- Deleted: Other terms (e.g. material safety data sheet).
- Revised: Some definitions revised to be GHS-consistent.
- New definitions added for classification.
c) New Definitions

- Classification
- Hazard Category
- Hazard Class
- Hazard Not Otherwise Classified (HNOC)
- Hazard Statement
- Label Elements
- Pictogram
- Precautionary Statement
- Product Identifier
- SDS
- Signal Word
- Simple Asphyxiants
- Substance

1910.1200(d) Hazard Classification

**Haz Com 1994**
Performance-orientated
- Definitions in paragraph (c), Appendices A and B.
- Appendix B – parameters for evaluating data.
- Minimum concentration of chemicals considered hazardous.

**Haz Com 2012**
Specific and detailed
- Concept of “classification” vs. “determination”.
- Each hazard class has detailed criteria to apply to data on the chemical.
- No minimum concentration
- Mixture rules are specific to each hazard class.

d) Hazard Classification
Chemical manufacturers and importers are required to perform a “hazard classification” of all chemicals they produce or import (Criteria in Appendices A and B):
- **Identify:** hazard class under health, physical and environmental* hazards.
- **Categorize:** hazard categories (degree of severity) are a sub-division of the hazard class.
- **Inform:** place hazard information for each hazard class and category on the label and in SDS.

*Not regulated by MIOSHA. Contact DEQ at (800) 662-9278 or deq-assist@michigan.gov for additional information.
d) Hazard Classification: Health

### Health Hazards

<table>
<thead>
<tr>
<th>Health Hazards</th>
<th>Hazard Class</th>
<th>Hazard Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye irritation</td>
<td>1A</td>
<td>2A</td>
</tr>
<tr>
<td>Respiratory or Skin Sensitization</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td>Derm Cell Mutagenicity</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>1A</td>
<td>1B</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity – Single Exposure</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity – Repeated Exposure</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Aspiration</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Simple Asphyxiants</td>
<td>Single Category</td>
<td></td>
</tr>
</tbody>
</table>

---

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

**Example - Acute Toxicity Hazard Categories**

<table>
<thead>
<tr>
<th>Exposure Route</th>
<th>Cat. 1</th>
<th>Cat. 2</th>
<th>Cat. 3</th>
<th>Cat. 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral (mg/kg)</td>
<td>≤ 5</td>
<td>&gt; 5 and ≤ 50</td>
<td>&gt; 50 and ≤ 300</td>
<td>&gt; 300 and ≤ 2000</td>
</tr>
<tr>
<td>Dermal (mg/kg)</td>
<td>≤ 5</td>
<td>&gt; 50 and ≤ 200</td>
<td>&gt; 200 and ≤ 1000</td>
<td>&gt; 1000 and ≤ 2000</td>
</tr>
<tr>
<td>Inhalation – Gases (ppmV)</td>
<td>≤ 100</td>
<td>&gt; 100 and ≤ 500</td>
<td>&gt; 500 and ≤ 2000</td>
<td>&gt; 2500 and ≤ 20000</td>
</tr>
<tr>
<td>Inhalation – Vapors (mg/l)</td>
<td>≤ 0.5</td>
<td>&gt; 0.05 and ≤ 2.0</td>
<td>&gt; 2.0 and ≤ 10.0</td>
<td>&gt; 10.0 and ≤ 20.0</td>
</tr>
<tr>
<td>Inhalation – Dusts &amp; Mists (mg/l)</td>
<td>≤ 0.05</td>
<td>&gt; 0.05 and ≤ 0.5</td>
<td>&gt; 0.5 and ≤ 1.0</td>
<td>&gt; 1.0 and ≤ 5.0</td>
</tr>
</tbody>
</table>

---

**Appendix F – Part D Table (Classifying Carcinogenicity)**

Part D. Table Relating Approximate Equivalences among IARC, NTP RoC, and GHS Carcinogenicity Classifications

<table>
<thead>
<tr>
<th>Approximate Equivalences Among Carcinogen Classification Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC</td>
</tr>
<tr>
<td>Group 1</td>
</tr>
<tr>
<td>Group 2A</td>
</tr>
<tr>
<td>Group 2B</td>
</tr>
</tbody>
</table>

---

5
d) Hazard Classification: 2012 Haz Com and GHS Differences

- Classifications in GHS **not** in 2012 Haz Com
  - Acute Toxicity Category 5
  - Skin Corrosion/Irritation Category 3
  - Aspiration Category 2
  
  Note: Consumer products may include these categories in their classification requirements for labeling. May also appear in SDS.

- Unclassified Hazards (not in GHS, in 2012 Haz Com)
  - Simple Asphyxiants (health hazard category)
  - Pyrophoric Gases (physical hazard category)
  - Combustible Dust (physical hazard category)
  - Hazards Not Otherwise Classified (HNOC)

---

**d) Hazard Classification: Physical**

### Physical Hazards

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Explosives</th>
<th>Incompatible Materials</th>
<th>Oxidizing Materials</th>
<th>Flammable Liquids</th>
<th>Oxidizing Liquids</th>
<th>Corrosive to Metals</th>
<th>Carcinogenic</th>
<th>Asphyxiants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Div 1.1</td>
<td>Div 1.2</td>
<td>Div 1.3</td>
<td>Div 1.4</td>
<td>Div 1.5</td>
<td>Div 1.6</td>
<td>Type A</td>
<td>Type B</td>
<td>Type A</td>
</tr>
<tr>
<td>Div 1.2</td>
<td>Div 1.3</td>
<td>Div 1.4</td>
<td>Div 1.5</td>
<td>Div 1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Div 1.3</td>
<td>Div 1.4</td>
<td>Div 1.5</td>
<td>Div 1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Div 1.4</td>
<td>Div 1.5</td>
<td>Div 1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Div 1.5</td>
<td>Div 1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Div 1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Physical Categories

**Example – Flammable Liquids Hazard Categories**

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Flash point &lt; 73 F (23°C) and initial boiling point ≤ 95°F (35°C)</td>
</tr>
<tr>
<td>2</td>
<td>Flash point &lt; 73°F (23°C) and initial boiling point &gt; 95°F (35°C)</td>
</tr>
<tr>
<td>3</td>
<td>Flash point ≥ 73°F (23°C) and ≤ 140°F (60°C)</td>
</tr>
<tr>
<td>4</td>
<td>Flash point &gt;140°F (60°C) and ≤ 200°F (93°C)</td>
</tr>
</tbody>
</table>
d) Hazard Classification - Mixtures

- 1994 – Mixture health hazards included if:
  - 0.1% for carcinogens.
  - 1% for all other effects.
- 2012 -GHS uses tiered approach within each hazard class
  - Step 1: Use available test data on the mixture as a whole to classify the mixture based on the substance criteria.
  - Step 2: Use bridging principles to extrapolate from other data (e.g. dilution principle for acute toxicity).
  - Step 3: Estimate hazards based on known information regarding ingredients of the mixture (cut-offs may be applied) exception for chronic hazards.
- Chemical manufactures and importers may rely on the information provided in ingredient SDSs; unless they believe it is inaccurate.

1910.1200 (e) Written Hazard Communication Program

<table>
<thead>
<tr>
<th>Haz Com 1994</th>
<th>Haz Com 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employers must have a written program:</td>
<td>No major changes</td>
</tr>
<tr>
<td>- Labels</td>
<td>- MSDS to SDS</td>
</tr>
<tr>
<td>- MSDSs</td>
<td>- Ensure employee training on new SDSs and label elements is conducted</td>
</tr>
<tr>
<td>- Information and training</td>
<td></td>
</tr>
<tr>
<td>- List of Chemicals</td>
<td></td>
</tr>
<tr>
<td>- Non-Routine Tasks</td>
<td></td>
</tr>
<tr>
<td>- Multi-Employer Worksites</td>
<td></td>
</tr>
<tr>
<td>- Available to employees</td>
<td></td>
</tr>
</tbody>
</table>

1910.1200 (f) Labels and other forms of warning

<table>
<thead>
<tr>
<th>Haz Com 1994</th>
<th>Haz Com 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipped containers to be labeled with:</td>
<td>Shipped containers to be labeled with:</td>
</tr>
<tr>
<td>- Identity</td>
<td>- Product identifier</td>
</tr>
<tr>
<td>- Hazard warning(s)</td>
<td>- Signal word</td>
</tr>
<tr>
<td>- Responsible party</td>
<td>- Hazard Statement</td>
</tr>
<tr>
<td>Performance-orientated with specifics left to discretion of chemical manufacturer or importer</td>
<td>- Pictograms</td>
</tr>
<tr>
<td></td>
<td>- Precautionary Statements</td>
</tr>
<tr>
<td></td>
<td>- Responsible party</td>
</tr>
</tbody>
</table>
(f) Labels and other forms of warning - Signal Words

- Word used to indicate the severity of the hazard and alert the reader to the potential hazard.
  - "DANGER" (more severe hazard)
  - "WARNING" (less severe hazard)

Appendix C
- Specifies what is required to be on the label (Cookbook for labeling)
- Lists label elements required based on:
  - Hazard Class
  - Hazard Category

(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

(f) Labels and other forms of warning – Precautionary Statements

- Precautionary statements describe recommended measures related to:
  - Prevention
  - Response
  - Storage
  - Disposal

Examples:
  - Wear respiratory protection
  - Wash with soap and water
  - Store in a well ventilated place

- Not a mandate for employers/employees to follow.
(f) Labels and other forms of warning - Pictograms

- A symbol plus other graphic elements intended to convey hazards.
- In the final rule, MIOSHA adopted 8 of 9 pictograms.
- All pictograms have red borders.
- All red diamonds (square on point) printed on a label or SDS must have a pictogram inside (no blank diamonds for label).

(f) Labels and other forms of warning - Pictograms Defined

<table>
<thead>
<tr>
<th>Physical Hazard</th>
<th>Health Hazard</th>
<th>Signal word</th>
<th>Hazard statement</th>
<th>Pictogram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxidizing</td>
<td>Acute toxicity (inhalation)</td>
<td>Danger</td>
<td>Fatal if</td>
<td>A</td>
</tr>
<tr>
<td>Corrosive</td>
<td>Acute toxicity (skin and eyes)</td>
<td>Danger</td>
<td>Toxic if</td>
<td>B</td>
</tr>
<tr>
<td>Fuming</td>
<td>Acute toxicity (inhalation)</td>
<td>Warning</td>
<td>Harmful if</td>
<td>C</td>
</tr>
<tr>
<td>Liquefied</td>
<td>Acute toxicity (inhalation)</td>
<td>Warning</td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>Reacts violently</td>
<td>Acute toxicity (inhalation)</td>
<td>Warning</td>
<td></td>
<td>E</td>
</tr>
<tr>
<td>Skin Irritant</td>
<td>Acute toxicity (skin and eyes)</td>
<td>Warning</td>
<td></td>
<td>F</td>
</tr>
<tr>
<td>Severe Respiratory Tox</td>
<td>Acute toxicity (skin and eyes)</td>
<td>Warning</td>
<td></td>
<td>G</td>
</tr>
<tr>
<td>Skin Sensit</td>
<td>Acute toxicity (skin and eyes)</td>
<td>Warning</td>
<td></td>
<td>H</td>
</tr>
</tbody>
</table>

(f) Labels and other forms of warning - Pictograms Defined (continued)

<table>
<thead>
<tr>
<th>Example: Label Information (Acute Oral Toxicity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pictogram</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>LD&lt;sub&gt;50&lt;/sub&gt; mg/kg</td>
</tr>
<tr>
<td>Signal word</td>
</tr>
<tr>
<td>Hazard statement</td>
</tr>
</tbody>
</table>
(f) Labels and other forms of warning - Pictograms Defined (continued)

Example: Label Information (Flammable Liquids)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Symbols called Pictograms
- Signal Words
- Hazard Statements
- Precautionary Statements
- Product Identification
- Supplier/Manufacturer Identification

(f) Labels and other forms of warning – New Label

There are several new label elements:
- Symbols called Pictograms
- Signal Words
- Hazard Statements
- Precautionary Statements
- Product Identification
- Supplier/Manufacturer Identification

(f) Labels and other forms of warning – Shipping Label

Effective June 1, 2015 all shipping labels will be required to have all GHS label elements.
DOT and MIOSHA Labels

- DOT labels may take precedence over similar GHS pictograms for shipping containers.
- DOT does not have labels that correspond to the "Health Hazard" or the "Acute Toxicity" (less severe = exclamation mark).

(f) Secondary Container Labels

Excerpt from the Hazard Communication Standard:

- (f) 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)(7)(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 hazard communication 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].
(f) Labels and Other Forms of Warning - Workplace Labeling for Secondary Containers

- Secondary labeling systems are still required.
- Must be consistent with 2012 revised Standard.
- 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.
- Employer can use GHS labels (same as manufacturer label).

<table>
<thead>
<tr>
<th>Flammability Criteria</th>
<th>GHS Category</th>
<th>NFPA 704 Rating</th>
<th>HMIS Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point &lt; 73°F(23°C) and initial boiling point 89°F</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Flash point &lt; 73 F (23°C) and initial boiling point 130°F</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Flash point ≥ 100°F(37.8°C) and ≤ 200°F(93.4°C)</td>
<td>3 or 4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Flash point &gt; 200°F(93.4°C) and will burn in air when exposed to a temperature of 1500°F(815.5°C) for a period of 5 min.</td>
<td>None</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

(f) Labels and other forms of warning - Hazards Not Otherwise Classified

- MIOSHA/OSHA has included a "Hazards not otherwise Classified" (HNOC) hazard class.
- Warnings must be provided for those hazards that are not included in GHS.
  - Combustible dust
  - Simple asphyxiants
  - Pyrophoric gas
  - Misc. HNOCs
1910.1200 (g) Safety Data Sheets (SDSs)

- **Haz Com 1994**
  - Specifies what information is required but format not specified.

- **Haz Com 2012**
  - Mandates:
    - 16-section SDS
    - Headings
    - Order of information
    - What is included under headings
  - MIOSHA will not enforce sections 12-15 (outside of jurisdiction – DEQ, etc.).

(g) Safety Data Sheets (SDSs)

New 16-section standardized SDS format required (ANSI Z400.1)

<table>
<thead>
<tr>
<th>Section</th>
<th>Identification</th>
<th>Section 2 - Hazard(s) Identification</th>
<th>Section 3 - Composition / Information on Ingredients</th>
<th>Section 4 - First-aid Measures</th>
<th>Section 5 - Fire-fighting Measures</th>
<th>Section 6 - Accidental Release Measures</th>
<th>Section 7 - Handling and Storage</th>
<th>Section 8 - Exposure Controls / Personal Protection</th>
<th>Section 9 - Physical and Chemical Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 10 - Stability and Reactivity</td>
<td>Section 11 - Toxicological Information</td>
<td>Section 12 - Ecological Information*</td>
<td>Section 13 - Disposal Consideration*</td>
<td>Section 14 - Transport Information*</td>
<td>Section 15 - Regulatory Information*</td>
<td>Section 16 - Other information including date of preparation of last revision</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Sections outside of MIOSHA jurisdiction but inclusion of these sections is necessary for a GHS compliant SDS

Methanol SDS

(Sigma Aldrich)

**2. HAZARD IDENTIFICATION**

- Emergency Overview
- HMIS Labels: Target Organs Effect, Toxic by Ingestion, Toxic by Skin Absorption, Irritant
- RF - Respiratory, Eyes, Skin, Eyes, Skin
- Do not inhale vapors, wear respiratory protection.
- Do not touch eyes, skin.
- Store in a cool dry place away from direct sunlight.
- Avoid contact with eyes, skin.
- Avoid breathing inhalation vapors.
- Clean spills with inert material.
- Disposal: Spent product is a hazardous waste.
Change to Posters: MSDS to SDS

1910.1200 (h) Employee Information and Training

Haz Com 1994
➢ Requires employee information and training before worker is exposed to the hazardous chemicals and whenever the hazard changes.

Haz Com 2012
➢ Clarifies that labels on shipped containers and workplace labels must be explained as well as SDS format.
➢ Workers will have to be trained on format and content of:
  • New labels
  • New SDS

(h) Employee Information and Training - Training Revisions

Haz Com training requirements now include:
➢ Signal words
➢ Pictograms
➢ Hazard classes and categories
  • Physical hazards
  • Health hazards
  • Hazards not otherwise classified
➢ Labels received on shipped containers
➢ Safety data sheet (SDS)
  • Including the order/format of information
  • Contents of each section

Employee training to be completed by December 1, 2013
1910.1200 (i) Trade Secrets

- No major changes to the definition and process.
- Trade secret status can now be claimed for percentage composition.
- Where a trade secret is claimed, a statement that the specific chemical identity and percentage of composition has been withheld as a trade secret is required.

Other Standards Affected – Health (signage requirements)

- Asbestos
- Carcinogens
- Vinyl Chloride
- Inorganic Arsenic
- Lead
- Cadmium
- Benzene
- Coke Oven Emissions
- Acrylonitrile
- Ethylene Oxide
- Formaldehyde
- Methyleneedianiline

DANGER
LEAD
MAY DAMAGE FERTILITY OR THE UNBORN CHILD
CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM
DO NOT EAT, DRINK OR SMOKE IN THIS AREA

New Sign “LEAD”

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

Other Standards Affected

- 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
## Effective Dates and Requirements

<table>
<thead>
<tr>
<th>Effective Completion Date</th>
<th>Requirement(s)</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 1, 2013</td>
<td>Train employees on the new label elements and SDS format</td>
<td>Employers</td>
</tr>
<tr>
<td>June 1, 2015</td>
<td>Compliance with all modified provisions of the final rule except:</td>
<td>Chemical manufacturers, importers, distributors, and employers</td>
</tr>
<tr>
<td>December 1, 2015</td>
<td>The distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label</td>
<td>Distributor</td>
</tr>
<tr>
<td>June 1, 2016</td>
<td>Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified hazards (and affected vertical standard specific signage)</td>
<td>Employer</td>
</tr>
<tr>
<td>Transition Period:</td>
<td>May comply with either MIOSHA Part 42, 92 and 430 (final standard), or the current standard, or both</td>
<td>Chemical manufacturers, importers, distributors, and employers</td>
</tr>
</tbody>
</table>

### Additional Information:

**Chemical Manufacturers, Importers and Distributors**

- **June 1, 2015** – Must have new SDS and labels sent to end users (Dec. 1, 2015 for distributors).
- Do not wait! Classification process is complicated and may take 2-3 years to develop new SDSs and labels.
- Raw material SDSs will be needed ASAP by those who blend or manufacture chemical mixtures so they can classify their products.

### Additional Toxicology Resources

- **Hazardous Substances Data Bank (HSDB)** - Comprehensive, peer-reviewed toxicology data for about 5,000 chemicals:  

- ECHA website (Dossiers submitted to EU for REACH registration):  

- eChemPortal:  
Federal OSHA Resources
Haz Com Web Page - www.osha.gov/dsg/hazcom/index.html

Regulatory
- Haz Com 2012 Final Rule
- Haz Com Comparison: (1994 vs. 2012)
  - Side-by-side
  - Redline Strikeout of the Regulatory Text
- FAQs

Guidance
- OSHA Briefs
- Fact Sheet
- Quick Cards
  - Labeling
  - Safety Data Sheets
  - Pictograms
  - Effective Dates
- OSHA Guide to GHS
  www.osha.gov/dsg/hazcom/ghs.html
- GHS documents (links to purple book)

MIOSHA Resources
Website and CET library handout (8/22/2012):
- CET-5531 HAZARD COMMUNICATION - GHS Overview of Major Changes to the Hazard Communication Standard
- DVDs on GHS and Haz Com through CET DVD/Video library services
- PowerPoint for employers to use to train employees
- Guidance documents including sample written program
- Revised posters
- State-wide seminars - Visit the MIOSHA CET webpage for GHS training calendar

Summary
- Reviewed updates to MIOSHA’s Hazard Communication Standard (Haz Com) and Act 154
- Highlighted the notable Haz Com changes (1994 vs. 2012)
  - Labels
  - Safety Data Sheets (SDS)
  - Training
- Discussed other MIOSHA Standards affected
- Reviewed available resources
Questions

Contact MIOSHA for additional information or assistance:

Consultation Education and Training (CET) Division
525 W. Allegan Street, P.O. Box 30643
Lansing, MI 48909-8143
(517) 284-7720
www.michigan.gov/miosha