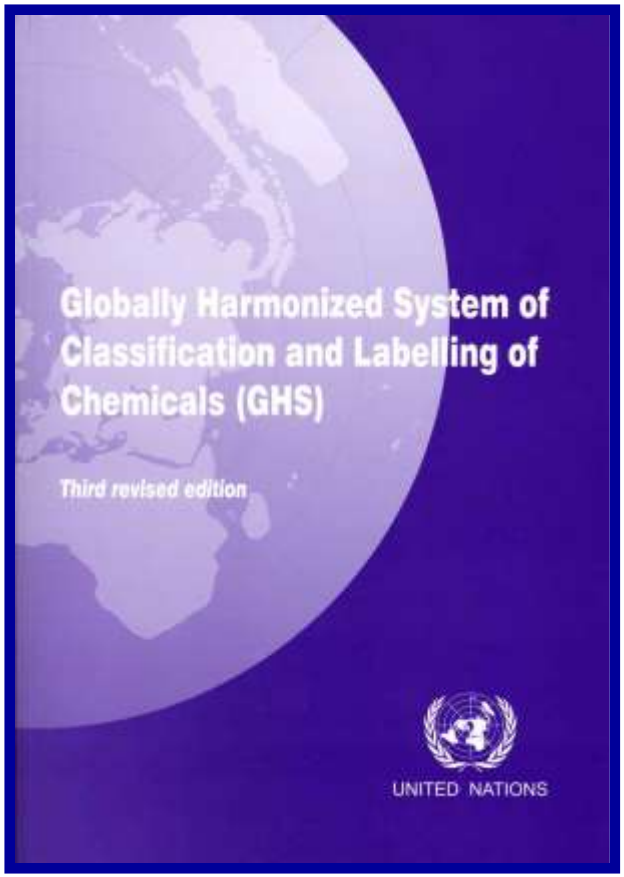
OSHA Hazard Communication Standard

29 CFR 1910.1200

New Globally Harmonized System of Classification and Labelling of Chemicals (GHS)



Name:Edwin Ojeda
Date:7/24/2014

14th Annual Native American Risk Management Conference

Hazard Communication Standard

- Initially developed in 1983, giving employees a “right to know”
- Requires a comprehensive hazard evaluation and communication process;
  - Ensuring hazards of all chemicals are evaluated
  - Creating awareness of chemical hazards along with necessary protective measure to employees
- Chemical manufacturers and importers must develop and provide a container label and a Safety Data Sheet (SDS).
- **Employers with employees exposed to hazardous chemicals must develop a hazard communication program including:**
  1. Labels
  2. Access to SDSs
  3. Training on the workplace hazardous chemicals

The current HCS establishes requirements for minimum information that must be included on labels and SDSs, but does not provide specific language to convey the information or a format in which to provide it.

5 MAIN REQUIREMENTS OF HAZCOM

- *Written Hazard Communication Plan*
- *Chemical Inventory*
- *Labels & Warnings*
- *Employee Training*
- *Safety Data Sheet Documents*

Background of GHS

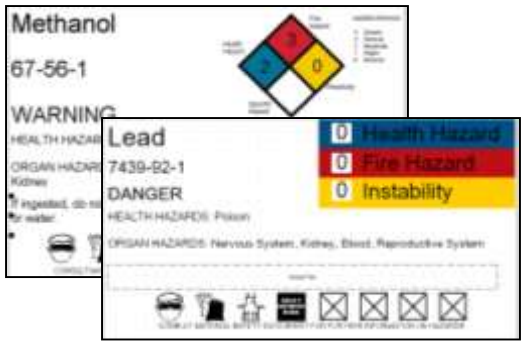
- United Nations Conference on Environment and Development (1992) mandated a globally harmonized chemical classification and labeling system
  - Many different countries were labeling hazardous chemicals, however formats and labels were grossly different, causing confusion

- GHS was formally adopted in 2002
  - United Nations Committee of Experts on the Transport of Dangerous Goods
  - Globally Harmonized System of Classification and Labeling of Chemicals.

- Four existing national workplace safety systems serve as the basis for GHS
  - United States
  - Canada
  - European Union
  - United Nations

What is GHS?

NFPA RTK - US



WHMIS Std – Canada

HSID Std - Europe

Globally-Standardized GHS Std

OSHA's Final Ruling on GHS

- OSHA has updated it's Hazard Communication Standard (HCS) to align with the United Nations' *Globally Harmonized System of Classification and Labeling of Chemicals* (GHS).

- Modifications will **reduce costs** and **burdens** while protecting employers and employees.

Modifications include:

- Revised *criteria for classification* of chemical hazards
- Revised and standardized *labeling requirements*
- A specified format for *safety data sheets*
- Requirements for *employee training* on labels and safety data sheets

Impact of GHS for U.S. Businesses

- **880,000 hazardous chemicals** are currently used in the U.S.
- Hazard Communication affects **43 million American workers** in over 5 million workplaces.
- GHS will prevent 500 injuries/illnesses and 43 lives per year, equaling a total of **$250 million in reduced health and safety risks.**
- Costs per year will total **$201 million dollars** to comply with revisions to the HCS.
- Future net benefits are estimated at **$556 million dollars per year.**

U.S. Dept. of Labor, OSHA, Directorate of Evaluation and Analysis, Office of Regulatory Analysis, 2011.

Changes Affecting U.S. Businesses

- With the new revised HCS that uses GHS formats, the following changes will affect U.S. businesses that handle hazardous chemicals:
  - Reclassification of Chemcial Hazards
  - Revision of SDSs and Labels
  - Management Familiarization and Employee Training
  - Label Printing Costs

- The revised HCS primarily affects manufacturers and importers of hazardous chemicals.

Breakdown of Annual GHS Implementation Costs

Reclassification of Chemical Hazards and Revision of SDSs and Labels .. **$22.5 million**
Employee Training ..... **$95.4 million**
Management Familiarization and Other Costs ..... **$59.0 million**
Additional Label Printing Costs ..... **$24.1 million**

U.S. Dept. of Labor, OSHA, Directorate of Evaluation and Analysis, Office of Regulatory Analysis, 2011.

UPDATING YOUR HAZCOM PROGRAM

1. Written Hazard Communication Plan

The starting point; your current plan:

- Blueprint for implementation
- Written plan that identifies how all requirements will be met, including:
  - labels and other forms of warning
  - safety data sheets (SDS)
  - employee information and training
- Review your current plan with the revised, published rule in-hand.

OSHA Model Hazard Communication Plan

UPDATING YOUR HAZCOM PROGRAM

1. Written Hazard Communication Plan

Model Hazard Communication Program

1. Company Policy

To ensure that information about the dangers of all hazardous chemicals used by (Name of Company) is known by all affected employees, the following hazardous information program has been established…

2. Container Labeling **– Revise & Train**
3. Safety Data Sheets (SDSs) **– Revisions. Obtain & Train.**
4. Employee Training and Information **– Update**
5. Hazardous Non-routine Tasks
6. Informing Other Employers/Contractors
7. List of Hazardous Chemicals **– Update Your Inventory**
8. Chemicals in Unlabeled Pipes
9. Program Availability

A copy of this program will be made available, upon request, to employees and their representatives.

OSHA Model Hazard Communication Plan

UPDATING YOUR HAZCOM PROGRAM

2. Chemical Inventory

Review your chemical inventory:

- Prepare list of chemicals
- Survey the workplace for chemicals:
  - solids/liquids/gases/fumes
- Check both the hazardous nature and potential for exposure
- Check for updated SDS's (see #4)
- Have procedures to record:
  - new chemical receipts
  - chemical purging
  - SDS management for both.
- Attach chemical list to written program

UPDATING YOUR HAZCOM PROGRAM

3. Labels & Warnings

- Update the labels and warnings section:
  - Process and execution for container labeling
  - Worn, missing and unreadable labels replaced as needed
- Check secondary container labels for consistency with the:
  - revised HazCom regulation
  - revised labels on containers being received
- Label identities should link to the SDS & chemical inventories
- Check warning signs & labels for OSHA Subpart Z-Toxic & Hazardous Substances. Many may be revised; eg § 1910.1027 Cadmium:

DANGER

CONTAINS CADMIUM

MAY CAUSE CANCER

CAUSES DAMAGE TO LUNGS

AND KIDNEYS

AVOID CREATING DUST

Label Changes

Labels will relate directly to what information is listed in SDSs from chemical manufacturers. All information on the label will also be found in the SDS.

- **Product Identifiers**
  - Chemical name, code, quantity, etc.
- **Supplier Information**
  - Manufacturer's company name and contact information
- **Hazard Statements**
  - Various detailed phrases describing the hazards associated with a chemical.
- **Precautionary Statements**
  - Recommended statements measures that should be taken to protect against hazardous exposures, improper storage or handling of a chemical
- **Signal Word**
  - One of two signal words for alerting level of hazard on each label:
    - DANGER – more severe hazards possible.
    - WARNING – denotes a less serious hazard.
- **Supplemental Information**
  - Any other instructional information that the chemical manufacturer would like to provide.
- **Pictograms**
  - Eight different black symbols with a diamond shaped red boarder that depict the hazard classification of the given substance.

TRAINING TIPS – Chemical Information

Chemical/Physical Risks

1. Explosives
2. Flammables
3. Oxidizers
4. Gases Under Pressure
5. Corrosives

Chemical Risks Pictograms

TRAINING TIPS – Chemical Information

Health Risks

1. Severe Toxics
2. Acute Toxics
3. Health Dangers
4. Corrosives

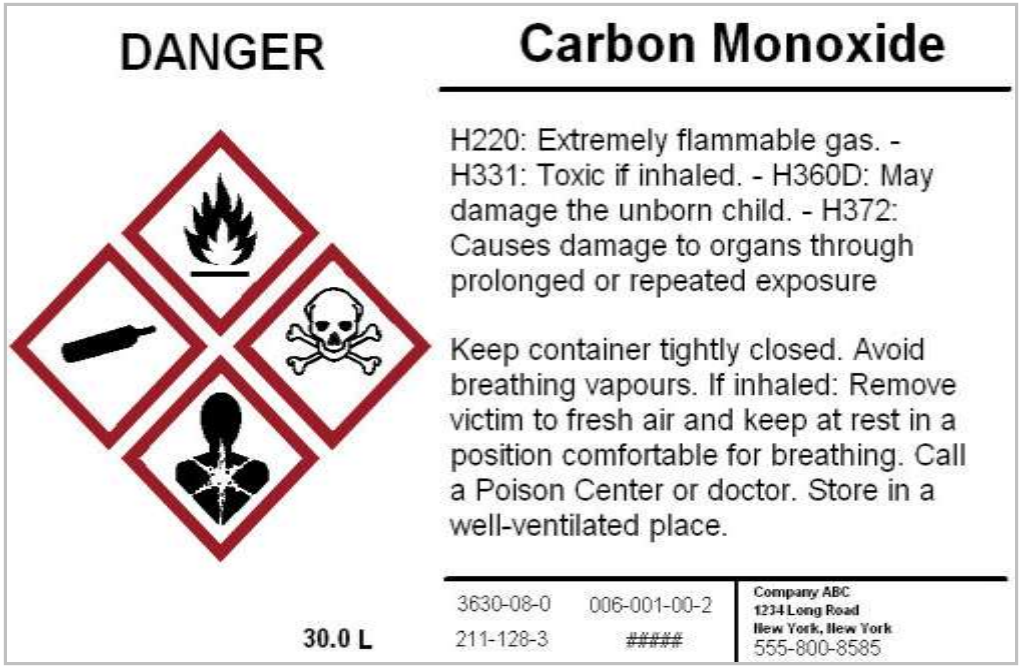
Health Risks Pictograms

Environmental Hazard Class*

OSHA does not regulate the Environmental Hazard Class, however the EPA is expected to incorporate this element of GHS into their standards.

EXAMPLE GHS HAZCOM LABEL

Example GHS Label



- Provides immediate visual reminders of hazards.
- Past labels were inconsistent in terminology and visuals.
- Standardized signal word, visuals, and hazard statements are in place.
- Pictograms reinforce message presented in the text while enhancing communication for low-literacy users.
- Precautionary statements provide useful steps to protect and prevent from chemical related injuries.

Secondary Container Labels

- Employers may choose to label workplace containers;
  - with the same GHS label that is used to ship containers under the revised rule,
  - or with label alternatives that meet the requirements for the standard.
- National Fire Protection Association (NFPA) 704 Hazard Rating and the Hazardous Material Information System (HMIS) for labeling are considered acceptable for workplace containers.
  - Information supplied on these labels must be consistent with the revised HCS, e.g., no conflicting hazard warnings or pictograms.
- It will be a best practice to label your secondary container chemicals with the **same GHS format** as the way they came into the facility

UPDATING YOUR HAZCOM PROGRAM

4. Safety Data Sheet Documents

- Check your safety data sheets (SDSs) against your chemical inventory.
  - Do you have an (M)SDS for each chemical in your inventory?
  - Do you have SDSs for other chemicals?
  - Have duplicates and obsolete SDSs been removed?

- Contact chemical suppliers to receive or learn when they will begin supplying SDS's according to the new format

- Are the SDSs readily accessible to employees?

Safety Data Sheet Changes

- GHS harmonization will standardize the order of SDS information for ease of use for employees along with improved accuracy of the information presented
- Previously know as Material Data Safety Sheets (MSDS), now will be referred to as Safety Data Sheets (SDS).
- The number of sections has been increased from a nine section format to 16 sections.

New SDS Order and Elements

1. **Identification of the substance or mixture and of the supplier**
2. **Hazards identification**
3. **Composition/information on ingredients**
4. **First aid measures**
5. **Firefighting measures**
6. **Accidental release measures**
7. **Handling and storage**
8. **Exposure controls/personal protection**
9. **Physical and chemical properties**
10. **Stability and reactivity**
11. **Toxicological information**
12. **Ecological information****
13. **Disposal considerations****
14. **Transport information****
15. **Regulatory information****
16. **Other information including information on preparation and revision of the SDS**

*****sections are not required in final rule but suggested by original U.N. GHS publication and may be added by employers*

Employee Training

5. Employee Training

- OSHA has not proposed to change training provisions under the HCS other than to initially train employees on new GHS elements.
- Minor revisions to the HCS on training:
  - Labels and SDSs must be adequately explained to employees.
  - Employees must understand standardized headings and sequence of SDS information.
  - Training on the standardized label elements must also be given.
- HCS training is meant to explain and reinforce information to the employees on areas of labels, SDSs, protective measures to be taken, and the understanding of chemical hazards in their workplace.

Training is crucial as a study found employees did not understand 1/3 of the safety and health information with SDSs, while 40% of persons reading an SDS had difficulty understanding them overall.

General Elements of HazCom/GHS Training

A. Understanding the new Hazard Communication Standard

B. Understanding the Safety Data Sheet

C. Understanding Labels

- Pictograms
- Signal Words
- Hazard Statements
- Precautionary Statements

D. Understanding Relationship of SDS and Label

E. Understanding Health Information

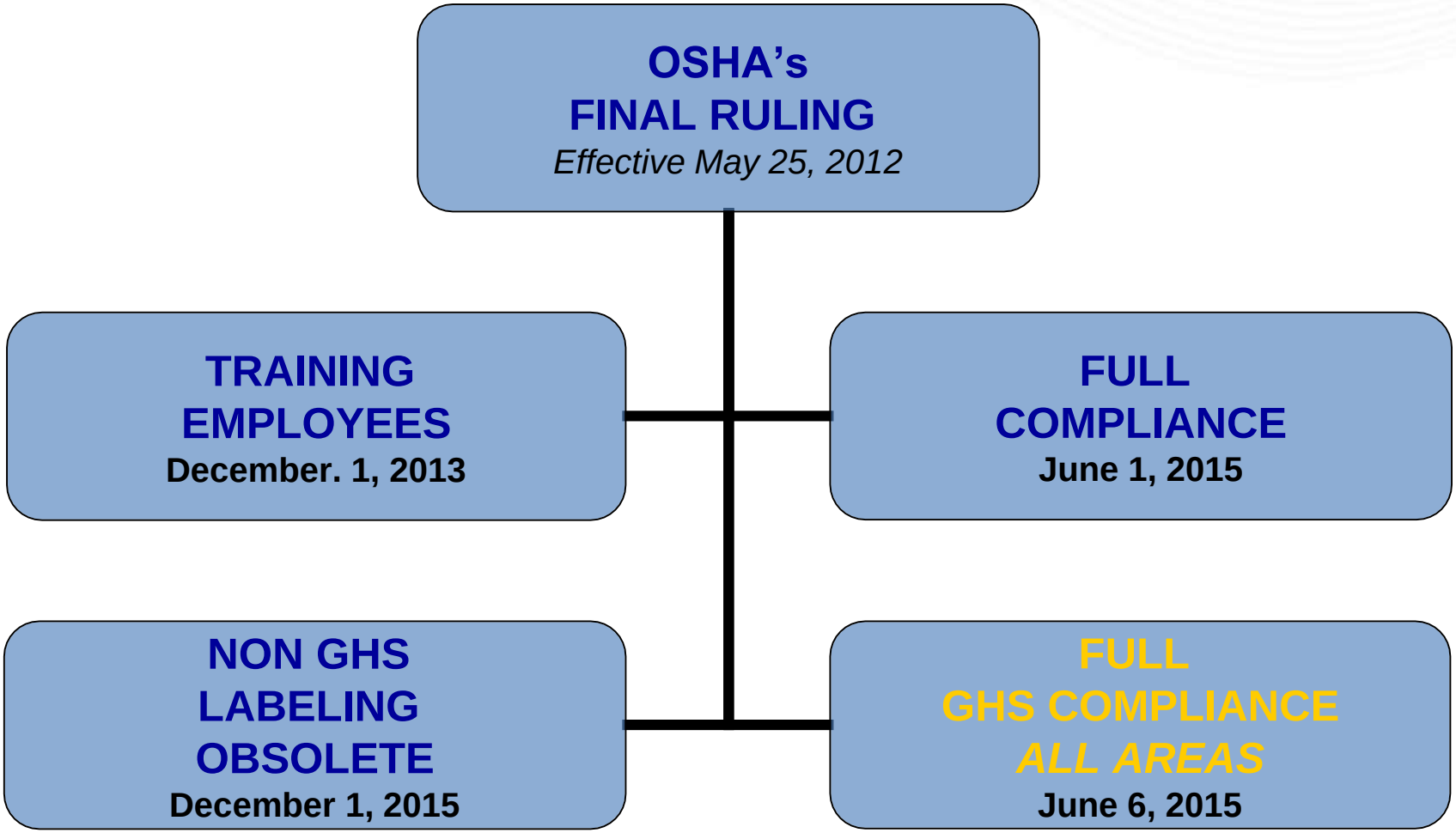
OSHA Draft Model for HazCom Training

Chemical Information of HazCom/GHS Training

- Use of visual GHS pictograms is the new method of identifying chemical hazards.
- Pictograms need to be interpreted through SDS and will be linked to the various risks involved with the type of chemicals.

- Divided into three hazard classes:
  1. Chemical/Physical Risks
  2. Health Risks
  3. Environmental Risks**

Time Table of Implementation



GETTING READY FOR GHS

- Get informed on regulation guidelines in the published regulation
- Begin implementing GHS by the specified timeframe
- Chemical manufacturers / importers should begin preparing for / authoring GHS-compliant SDS's and labeling
- Train your employees on GHS
- Stay alert for newly formatted SDS's. Capture and file them.
- Update your chemical inventory
- Talk to your chemical suppliers about their transition plans
- Confirm that your secondary labeling system is GHS compliant. Use updated (GHS) labeling software to create and produce your labels