



Hazard Communication 2012: One Year of Implementation

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1:00-2:30 PM



HazCom 2012 – One Year

- Public awareness has been the key OSHA activity
 - Webinars and speeches
 - Training for regional Hazard Communication Coordinators
 - Hazard Communication Roundtable
 - Responding to public inquiries
 - Drafting revisions to the HazCom directive
 - Working on guidance/compliance assistance products



One year, cont.

- Litigation Issues
- Continuing work on international issues
- Number 1 Lesson for OSHA?
 - Many stakeholders do not know the requirements of the 1994 HCS...and the questions being asked are often about longstanding requirements rather than the new provisions



What We Will Cover

- Training requirements for December 1, 2013
 - Training principles
 - Considerations for design of training
 - What subjects to address
- Update on Other Implementation Issues
- Guidance and Other Resources for Compliance
- International activities



REQUIRED TRAINING



2013 Required Training

- Employers are already required to provide effective information and training on the hazardous chemicals in their work areas
 - Must be done at the time of initial assignment to work with a chemical, and when a new chemical hazard is introduced into the work area
 - May be done by chemical, or by hazard (e.g., flammable liquids)



Required Training, cont.

- In addition, the training required includes the following:
 - (h)(3)(iv) The details of the hazard communication program developed by the employer, including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer; the safety data sheet, including the order of information and how employees can obtain and use the appropriate hazard information.

Required Training, cont.

- Since HazCom 2012 is requiring a new label and SDS, OSHA has specified that employers must provide training on the new approach
- This training will help ensure that workers can access and use the information on the new labels and SDSs effectively
- New labels and SDSs are already being produced and are coming into American workplaces



Required Training, cont.

- Specifically, OSHA has stated:
 - Employers shall train employees regarding the new label elements and safety data sheet format by December 1, 2013
- The 2013 training thus does NOT include a requirement to re-train on all hazards
- The training is to ensure that employees understand the new label and SDS approach



TRAINING PRINCIPLES, & SUBJECTS TO COVER



Considerations

- How and when will this training be conducted?
- What will be covered?
- Who will be doing the training?
- Have you developed a curriculum?
- Is there other training you need to do that could also be addressed (for example, re-training on the hazards)?

Other Factors

- While new labels and SDSs are required to be provided by manufacturers and importers by June 1, 2015, employers have until June 1, 2016 to make adjustments to their workplace programs for any new hazards identified as a result of the transition to the GHS system
- If workplace labeling changes (i.e., alternative systems are used), workers will have to be trained on this as well—timing will depend on when the workplace labeling is updated



Topics to Address in Training

- Why is the training being done now?
 - Labels and SDSs are changing
 - Information is being standardized and specified
 - All suppliers of a chemical should communicate hazards in the same way

Topics to Address in Training, cont.

- Role of labels
 - Immediate source of information
 - New labels have more information
- What is a label element?
 - Each label element should be explained
 - Hazard class should also be addressed to help understand the label elements
 - Example label should be provided

Topics to Address in Training, cont.

- Safety Data Sheet (SDS)
 - Format (sections)
 - Information found on SDSs
- Requirements (accessibility and use)

Role of Labels

- Labels are the immediate source of information on a chemical
- New labels will have more information than current labels
- There may also be additional information (known as supplemental information) on the label that is not required—the required information should be presented together on the label



Training on Label Elements

- Labels on shipped containers of hazardous chemicals will be changing by June 1, 2015
- The primary change is that information on labels has been standardized
 - There are certain types of information required to appear on labels
 - All suppliers have the same requirements, so labels should be more consistent in approach than current labels



What is a label element?

- “Label element” means the specified pictogram(s), hazard statement(s), signal word and precautionary statement(s) for each hazard class and category

Example of a Hazard Class w/Categories (Appendix A: A.1): Acute Toxicity

Exposure route	Category 1	Category 2	Category 3	Category 4
Oral (mg/kg bodyweight) <u>see:</u> Note (a) Note (b)	≤ 5	>5 and ≤ 50	>50 and ≤ 300	>300 and ≤ 2000
Dermal (mg/kg bodyweight) <u>see:</u> Note (a) Note (b)	≤ 50	>50 and ≤ 200	>200 and ≤ 1000	>1000 and ≤ 2000
Inhalation - Gases (ppmV) <u>see:</u> Note (a) Note (b) Note (c)	≤ 100	>100 and ≤ 500	>500 and ≤ 2500	>2500 and ≤ 20000
Inhalation - Vapors (mg/l) <u>see:</u> Note (a) Note (b) Note (c) Note (d)	≤ 0.5	>0.5 and ≤ 2.0	>2.0 and ≤ 10.0	>10.0 and ≤ 20.0
Inhalation - Dusts and Mists (mg/l) <u>see:</u> Note (a) Note (b) Note (c)	≤ 0.05	>0.05 and ≤ 0.5	>0.5 and ≤ 1.0	>1.0 and ≤ 5.0

Label Requirements

- Labels on shipped containers must include:
 - Product Identifier
 - Signal Word
 - Pictogram
 - Hazard Statement(s)
 - Precautionary Statement(s)
 - Supplier Identification (Name, Address, Phone Number)










Signal Word

- “Signal word” means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label
- The signal words used in this section are “danger” and “warning.” “Danger” is used for the more severe hazards, while “warning” is used for the less severe















Pictogram

- “Pictogram” means a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical
- Eight pictograms are designated under this standard for application to a hazard category

HCS Pictograms and Hazards

<p>Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p>Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<p>Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
<p>Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases Under Pressure 	<p>Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p>Flame Over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p>Environment (Non-Mandatory)</p>  <ul style="list-style-type: none"> • Aquatic Toxicity 	<p>Skull and Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

Examples of Transport “Labels”

 <ul style="list-style-type: none"> • Flammable Gas • Flammable Aerosol 	 <ul style="list-style-type: none"> • Flammable solids • Self-Reactive substances and mixtures 	 <ul style="list-style-type: none"> • Pyrophoric solids • Pyrophoric liquids • Self-heating Substances and mixtures
 <ul style="list-style-type: none"> • Substances and mixtures, which in contact with water, emit flammable gases 	 <ul style="list-style-type: none"> • Oxidizing gases • Oxidizing liquids • Oxidizing solids 	 <ul style="list-style-type: none"> • Self reactive substances and mixtures (type B) • Organic peroxides
 <ul style="list-style-type: none"> • Explosives (Division 1.4) 	 <ul style="list-style-type: none"> • Explosives (Division 1.5) 	 <ul style="list-style-type: none"> • Explosives (Division 1.6)
 <ul style="list-style-type: none"> • Gases under pressure 	 <ul style="list-style-type: none"> • Acute toxicity: Oral • Acute toxicity: Skin • Acute toxicity: Inhalation 	 <ul style="list-style-type: none"> • Corrosive to metals • Skin corrosion/irritation
 <ul style="list-style-type: none"> • Aquatic toxicity (Acute) • Aquatic toxicity (Chronic) 	 <ul style="list-style-type: none"> • Organic Peroxides 	

Hazard Statement

- “Hazard statement” means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard
 - Example: Fatal if swallowed (Acute Oral Toxicity)

Precautionary Statement

- “Precautionary statement” means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling
 - Example: Do not eat, drink, or smoke when using this product
 - Example: Keep container tightly closed



Precautionary Statements, cont.

- The statements assigned to a chemical address the following four areas
 - Prevention
 - Response
 - Storage
 - Disposal

Label Example

Xyz... Chemical



WARNING
Flammable Liquid and vapor
Harmful if swallowed
May cause damage to organs (liver)
May cause damage to organs through prolonged or repeated exposure (heart)
Suspected of damaging fertility

Keep away from heat, sparks, open flames and hot surfaces - No smoking. Do not breathe vapors. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use protective equipment as required. Wear protective gloves and eye protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof electrical, ventilating, lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Store locked up in a well ventilated place. Keep cool. Dispose of contents and container in accordance with local, state and federal regulations.

First Aid:
If swallowed: Call a doctor if you feel unwell, Rinse mouth.
If on skin or hair: Remove immediately all contaminated clothing. Rinse skin with water.
If exposed or if you feel unwell: call a doctor.

Fire:
In case of fire: Use water spray foam, dry chemical or carbon dioxide (CO₂) for extinction

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Role of the Safety Data Sheet

- The Safety Data Sheet is the detailed source of information about the chemical
 - The SDS has many audiences
 - The SDS is thus a reference to help ensure a chemical is handled safely

Safety Data Sheet Format

- New safety data sheets will be organized using a specified order of information
- The required information will appear in the same sections of an SDS regardless of the supplier
- The most important information will be listed in the first sections of the SDS

SDS Sections

1. Identification
2. Hazard(s) identification
3. Composition/information on ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure control/personal protection



SDS Sections, cont.

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

NFPA: Flammability



Example of New Format SDS

NFPA 704 Placard & Ratings Voluntarily Provided

GHS System and Labels Down in Section 2

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Product XYZ			
Synonyms	:				
SDS Number	:	888100008809	Version	:	1.1
Product Use Description	:	Fuel			
Company	:				
		Chemtrec	:	(800) 424-9300	
		(Emergency Contact)			

SECTION 2. HAZARDS IDENTIFICATION

Classifications	:	Flammable Liquid – Category 1 or 2 depending on formulation. Aspiration Hazard – Category 1 Carcinogenicity – Category 2 Specific Target Organ Toxicity (Repeated Exposure) – Category 2 Specific Target Organ Toxicity (Single Exposure) – Category 3 Skin Irritation – Category 2 Eye Irritation – Category 2B Chronic Aquatic Toxicity – Category 2
Pictograms	:	A large yellow arrow with a red outline points from the 'Classifications' row to the 'Pictograms' row. Below the arrow are four GHS pictograms in red diamonds: a flame (Flammable), a person with a star on their chest (Health Hazard), an exclamation mark (Irritant/Corrosive), and a dead tree and fish (Environment).
Signal Word	:	Danger

SDS Requirements

- SDSs must be readily accessible to workers when they are in their work areas, during each work shift
- Hazard communication works when employers also use SDS information to make sure that proper protective measures are being implemented

Elements of Effective Training

- Determine training needs
- Identify training needs
- Identify goals and objectives
- Identify learning activities
- Conduct the training
- Evaluate program effectiveness
- Improve the training

IMPLEMENTATION ISSUES



Implementation Issues

- OSHA has received many questions regarding interpretations of HazCom 2012
- Responses to common questions are provided on OSHA's Hazard Communication web page:
<http://www.osha.gov/dsg/hazcom/index.html>



Classification

- HazCom 2012 covers workplace hazards
- For effects such as sensitization or CMRs (carcinogens, mutagens, reproductive hazards) that have a hazard category that is divided into sub-categories A and B:
 - If the data is available, then you must classify into the most hazardous sub-category
 - If the data does not allow classification into the sub-category, then you may use the category
- You may include GHS hazard categories that are not covered by the HCS



Combustible Dust

- HazCom 2012 does not define combustible dust, but OSHA provides guidance through
 - OSHA's Combustible Dust National Emphasis Program Directive CPL 03-00-008
 - NFPA standards
- Materials that present a combustible dust hazard in their shipped form must be labeled
- The SDS must include the following information:
 - List the classification in Section 2
 - Signal word (Warning)
 - Hazard statement



Combustible Dust, cont.

- Special labeling provision (f)(4): label may be shipped with the safety data sheet for solid materials that present a hazard only when processed or used downstream
- On March 25th, 2013, OSHA published a letter of interpretation on combustible dust and the labeling requirements



Pesticides

- OSHA has maintained the same exemptions for labeling under (b)(5) – FIFRA labels are exempt
- SDSs are required for workplaces under OSHA's jurisdiction
- Stakeholders were concerned about conflicts between EPA label and the OSHA SDS
 - Signal words
 - Chronic effects
- EPA has published a Pesticide Registration Notice (PRN 2012-1)



Labels

- Small Packages
 - No exemptions for small packages
 - OSHA provides practical accommodations on a case-by-case basis
- Pictograms
 - Blank pictograms are not permitted on a label
- No size requirements for labels

Labels, cont.

- Information on hazards not otherwise classified may be included along with the supplemental information on the label, but is not required
- Precautionary statements and hazard statements may be combined or consolidated to save label space and improve readability

Labels, cont.

- A DOT label (placard) is required for transport. An OSHA/HCS label is required for the workplace
- The DOT and HCS labels may appear for the same hazard, depending upon the container's use
- Consumer products subject to CPSC labeling requirements are exempted from the labeling requirements of the HCS



Labels, cont.

- Workplace Labeling
 - No change to general workplace labeling requirements
 - HMIS labels and NFPA ratings, by themselves, are not sufficient for workplace labels
 - NFPA rating systems used for emergency response
- Before the June 1, 2015 deadline, employers may use labels compliant with HCS 1994



Safety Data Sheets

- Distribution
 - An updated SDS must be provided with products shipped by June 1, 2015
 - Companies are not required to send new SDSs to previous customers who may still have the product in inventory
 - New SDSs do not have to be provided for chemicals no longer produced

Safety Data Sheets, cont.

- Section headings for SDS sections 12-15 must still be listed on the SDS; OSHA will not be enforcing the content of these sections
- The requirements to maintain MSDSs or SDSs under 29 CFR 1910.1020 have not changed
- The conditions under which employers may maintain SDSs electronically in the workplace have not changed
- SDSs must be in English; they may also be kept in other languages
- A red border is not required for pictograms on SDSs
- Hazards Not Otherwise Classified should be described in Section 2 of the SDS



Safety Data Sheets, cont.

- Component disclosure on SDSs
 - Options for using ranges instead of exact percentages include trade secret, batch-to-batch variation, similar mixtures
 - With very small variances or tolerances during production, the anticipated percentage in the formula may be used
 - In all cases the concentration ranges must have no effect on the hazard of the mixture

Trade Secrets

- For mixtures, the trade secret provisions apply to the individual chemicals and their associated CAS numbers
- When a company is claiming a percentage as a trade secret, a statement saying that information is withheld as a trade secret is required in SDS Section 3

Other Standards

- With the exception of several definition changes and an edit to Appendix A for SDSs, the laboratory standard was not changed
- Changes to other standards were made to minimize changes to scope. For example, the change to the definition of flammable liquid is expected to have minimal to no impact on PSM, flammable storage requirements, and shipping requirements

GUIDANCE, OUTREACH, AND INTERNATIONAL ACTIVITIES



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Hazard Communication

Aligns with the UN's Globally Harmonized System of Classification and Labeling of Chemicals

HAZARD COMMUNICATION

The standard that gave workers the right to know, now gives them the right to understand.

[Safety & Health Topics Page: Hazard Communication](#)

[Labeling](#) [Safety Data Sheets](#) [Pictograms](#) [Effective Dates](#)



Dr. David Michaels discusses the publication of the Final Rule for Hazard Communication

[\[Video | Statement\]](#)

"Exposure to hazardous chemicals is one of the most serious threats facing American workers today," said U.S. Secretary of Labor Hilda Solis. "Revising OSHA's Hazard Communication standard will improve the quality and consistency of hazard information, making it safer for workers to do their jobs and easier for employers to stay competitive."

The 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. Once implemented, the revised standard 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.

Highlights:

- December 1, 2013 Training Requirements Fact Sheet [PDF*, 289 KB]
- OSHA Brief on Labels and Pictograms [PDF*, 427 KB]
- [HCS/HazCom 2012 Final Rule](#)
 - Federal Register:** The Final Rule was filed on March 20th at the Office of the Federal Register and available for viewing on their Public Electronic Inspection Desk. The Federal Register published the final rule on March 26, 2012. The effective date of the final rule is 60 days after the date of publication.
 - [Federal Register](#) [PDF*, 52 MB]
- HCS Comparison: HazCom 1994 and HazCom 2012
 - [Side-by-side](#)
 - [Redline Strikeout of the Regulatory Text](#)
- [HazCom 1994](#)
- Press Release:** US Department of Labor's OSHA publishes final rule to update the Hazard Communication Standard (HCS)
- Guidance
 - [OSHA Briefs](#) [PDF*, 260 KB]
 - [Fact Sheet](#)
 - [Quick Cards](#)
- [Downloadable Pictograms](#)
- [August 2012 OSHA/SCHA Alliance Webinar](#)
- [Downloadable Hazard Communications 2012 Presentation](#) [PPTX*,]
- [Question of the Month](#)



Guidance and Outreach



Hazard Communication Standard Labels

OSHA has updated the requirements for labeling of hazardous chemicals under its Hazard Communication Standard (HCS). As of June 1, 2015, all labels will be required to have pictograms, a signal word, hazard and precautionary statements, the product identifier, and supplier identification. A sample revised HCS label, identifying the required label elements, is shown on the right. Supplemental information can also be provided on the label as needed.



Hazard Communication Safety Data Sheets

The Hazard Communication Standard (HCS) requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) to communicate the hazards of hazardous chemical products. As of June 1, 2015, the HCS will require new SDSs to be in a uniform format, and include the section numbers, the headings, and associated information under the headings below:



Hazard Communication Standard Pictogram

As of June 1, 2015, the Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

HCS Pictograms and Hazards

Health Hazard	Flame	Exclamation Mark
<ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)



Guidance and Outreach, cont.

OSHA is developing an array of guidance materials

- Initial Materials
 - Quick cards; OSHA briefs; booklets; small entity compliance guides; wallet-sized card
- Technical Materials
 - Model training materials; Safety Data Preparation guidance; Hazard Classification Guidance
- Web Applications
 - SDS Electronic Form; Label Elements Application; Acute Toxicity Calculator



Updated Webpages

- HazCom 2012 Webpage
<http://www.osha.gov/dsg/hazcom/index.html>
- Safety & Health Topics Webpage
<http://www.osha.gov/dsg/hazcom/index2.html>
- UN GHS Sub-Committee Home Page
http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html



International Harmonization

- UN Sub-committee: *Globally Harmonized System of Classification and Labelling of Chemicals (GHS)*
 - GHS allows choices
 - Meets twice a year to discuss issues
 - Implementation issues
 - Practical classification Issues
 - Other harmonization issues
 - Works on two year cycles (Biennium)
 - Public meeting held June 12, 2013



International Harmonization, cont.

- OSHA
 - Supported adoption of the international mandate to develop the GHS
 - Helped to negotiate the provisions of the GHS
 - Leads the current US delegation to the United Nations' Committee and Sub-committee on the GHS, as well as Chairs the Sub-committee
- Interagency Group
 - OSHA, EPA, State, DOT, CPSC, US Coast Guard



International Harmonization, cont.

- Regulatory Cooperation Council
 - To foster harmonization as Canada and US work to implement GHS, including guidance and future updates
 - Memorandum of Understanding signed June 19, 2013

International Activities

- UN Sub-Committee – December 2012: End of the Biennium
 - Notable changes
 - Update of the Skin and Eye Chapters
 - Changes in precautionary statements
 - Guidance on combustible dust information for the Safety Data Sheet
 - Other Work Streams
 - Combustible Dust work continues; work on exploring a global list of classifications; streamlining the physical properties section of the SDS



Conclusions

- By December 1, 2013, employee training is required on label information and SDS format
 - With proper planning and consideration, employers should be able to comply on time and conduct effective training programs
- Implementation of HazCom 2012 is proceeding on course
- OSHA continues to provide additional guidance and other resources to assist employer implementation
- OSHA continues to work with other federal agencies and Canada on international issues





Thank you for attending today's Webinar on the Hazard Communication Standard 2012: One Year of Implementation

- OSHA's Hazard Communication Website
 - » <http://www.osha.gov/dsg/hazcom/index.html>
- SCHC Website
 - » www.schc.org



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