

Revised Hazard Communication Standard (and not GHS)

How Has HazCom Not Changed?

- **Basic framework will remain the same**
- **Scope**
- **Exemptions**
- **Written plan required**
- **Communication of hazards through labels and safety data sheets**
- **Training**
- **Does it work for you???**

How Has HazCom Changed?

- **Hazard classification:**
Provides specific criteria for classification of health and physical hazards, as well as classification of mixtures.
- **Labels:**
Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.
- **Safety Data Sheets:**
Will now have a specified 16-section format.

Appendices are the Secret

- 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)**

Dates of Implementation

Published Date: March 26, 2012

Effective Date: May 25, 2012

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers
June 1, 2015* December 1, 2015	Compliance with all modified provisions of this final rule, except: The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period to the effective completion dates noted above	May comply with either 29 CFR 1910.1200 (the final standard), or the current standard, or both	Chemical manufacturers, importers, distributors, and employers

11 Health Hazard Classes

- Acute Toxicity
- Skin Corrosion/Irritation
- Serious Eye Damage/Eye Irritation
- Respiratory or Skin Sensitization
- Germ Cell Mutagenicity
- Carcinogenicity
- Reproductive Toxicity
- Specific Target Organ Toxicity Single Exposure
- Specific Target Organ Toxicity Repeated or Prolong Exposures
- Aspiration Hazard
- Simple Asphyxiant

18 Physical Hazard Classes

- Explosives
- Gases Under Pressure
- Self-reactive Chemicals
- Pyrophoric Liquids
- Pyrophoric Solids
- Pyrophoric Gases
- Self-heating Chemicals
- Organic Peroxides
- Chemicals Which, in Contact with Water, Emit flammable Gases
- Flammable Gases
- Flammable Aerosols
- Flammable Liquids
- Flammable Solids
- Oxidizing Gases
- Oxidizing Liquids
- Oxidizing Solids
- Corrosive to Metals
- Combustible Dust

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 Solid	1						
Pyrophoric Gases	Single category						
Self-heating Chemicals	1	2					
Chemicals, which in 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 Dusts	Single category						

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

For more information:

HCS Pictograms and Hazards

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

Elements of Shipping Labels

- **Product identifier**
- **Contact information**
- **Standardized hazard pictograms**
- **Standardized signal words**
 - “Danger” or “Warning”
- **Standardized hazard statements (codified)**
- **Precautionary statements (codified)**
 - Prevention, response, storage, disposal

Hazard Statements

▪ Example: Flammable liquids

- Category 1: Extremely flammable gas and vapor
- Category 2: Highly flammable liquid and vapor
- Category 3: Flammable liquid and vapor
- Category 4: Combustible liquid

Appendix C

C.4.19 FLAMMABLE LIQUIDS (Classified in Accordance with Appendix B.6)

Pictogram
Flame



Hazard category	Signal word	Hazard statement
1	Danger	Extremely flammable liquid and vapor
2	Danger	Highly flammable liquid and vapor
3	Warning	Flammable liquid and vapor

Precautionary statements			
Prevention	Response	Storage	Disposal
<p>Keep away from heat/sparks/open flames/hot surfaces.– No smoking. Chemical manufacturer, importer, or distributor to specify applicable ignition source(s).</p> <p>Keep container tightly closed.</p> <p>Ground/Bond container and receiving equipment - <i>if electrostatically sensitive material is for reloading.</i> - <i>if product is volatile so as to generate hazardous atmosphere.</i></p> <p>Use explosion-proof electrical/ventilating/lighting/...equipment. ... Chemical manufacturer, importer, or distributor to specify other equipment.</p> <p>Use only non-sparking tools.</p> <p>Take precautionary measures against static discharge.</p> <p>Wear protective gloves/eye protection/face protection Chemical manufacturer, importer, or distributor to specify type of equipment.</p>	<p>If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>In case of fire: Use ... to extinguish. ... Chemical manufacturer, importer, or distributor to specify appropriate media. - <i>if water increases risk.</i></p>	<p>Store in a well-ventilated place. Keep cool.</p>	<p>Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified).</p>

Cheat Sheets Flame



Flammable gases 1

Flammable aerosols 1, 2

Flammable liquids 1, 2, 3

Pyrophoric liquids 1, 2

Pyrophoric solids 1, 2

Pyrophoric gases

Self-heating chemicals 1, 2

Emits flammable gas upon contact
w/H₂O 1, 2, 3


Organic peroxides B, C, D, E, F

Self-reactive chemicals B, C, D, E, F

I Just Like This Poster

- Go to: <http://www.safe-workaustralia.gov.au/sites/swa/about/publications/pages/classification-labelling-poster>
- Go to bottom of page for links to one page or four page poster.

Work Health and Safety Regulations:
Classification and labelling for workplace hazardous chemicals



Classification		Labelling					
Code	Signal word	Pictogram code ¹	Signal word	Code	Signal word		
CORROSIVE	CORROSIVE		DANGER	C01	CORROSIVE		
						C02	CORROSIVE
						C03	CORROSIVE
						C04	CORROSIVE
						C05	CORROSIVE
						C06	CORROSIVE
						C07	CORROSIVE
						C08	CORROSIVE
						C09	CORROSIVE
						C10	CORROSIVE
DANGEROUS	DANGEROUS		DANGER	D01	DANGEROUS		
						D02	DANGEROUS
						D03	DANGEROUS
						D04	DANGEROUS
						D05	DANGEROUS
						D06	DANGEROUS
						D07	DANGEROUS
						D08	DANGEROUS
						D09	DANGEROUS
						D10	DANGEROUS
HAZARDOUS	HAZARDOUS		DANGER	H01	HAZARDOUS		
						H02	HAZARDOUS
						H03	HAZARDOUS
						H04	HAZARDOUS
						H05	HAZARDOUS
						H06	HAZARDOUS
						H07	HAZARDOUS
						H08	HAZARDOUS
						H09	HAZARDOUS
						H10	HAZARDOUS
VERY DANGEROUS	VERY DANGEROUS		DANGER	V01	VERY DANGEROUS		
						V02	VERY DANGEROUS
						V03	VERY DANGEROUS
						V04	VERY DANGEROUS
						V05	VERY DANGEROUS
						V06	VERY DANGEROUS
						V07	VERY DANGEROUS
						V08	VERY DANGEROUS
						V09	VERY DANGEROUS
						V10	VERY DANGEROUS

Classification		Labelling					
Code	Signal word	Pictogram code ¹	Signal word	Code	Signal word		
CORROSIVE	CORROSIVE		DANGER	C01	CORROSIVE		
						C02	CORROSIVE
						C03	CORROSIVE
						C04	CORROSIVE
						C05	CORROSIVE
						C06	CORROSIVE
						C07	CORROSIVE
						C08	CORROSIVE
						C09	CORROSIVE
						C10	CORROSIVE
DANGEROUS	DANGEROUS		DANGER	D01	DANGEROUS		
						D02	DANGEROUS
						D03	DANGEROUS
						D04	DANGEROUS
						D05	DANGEROUS
						D06	DANGEROUS
						D07	DANGEROUS
						D08	DANGEROUS
						D09	DANGEROUS
						D10	DANGEROUS
HAZARDOUS	HAZARDOUS		DANGER	H01	HAZARDOUS		
						H02	HAZARDOUS
						H03	HAZARDOUS
						H04	HAZARDOUS
						H05	HAZARDOUS
						H06	HAZARDOUS
						H07	HAZARDOUS
						H08	HAZARDOUS
						H09	HAZARDOUS
						H10	HAZARDOUS
VERY DANGEROUS	VERY DANGEROUS		DANGER	V01	VERY DANGEROUS		
						V02	VERY DANGEROUS
						V03	VERY DANGEROUS
						V04	VERY DANGEROUS
						V05	VERY DANGEROUS
						V06	VERY DANGEROUS
						V07	VERY DANGEROUS
						V08	VERY DANGEROUS
						V09	VERY DANGEROUS
						V10	VERY DANGEROUS

¹ The pictogram code is the number of the pictogram in the pictogram key in the Safety Data Sheet (SDS) for the chemical.

² The hazard code is the number of the hazard in the hazard key in the SDS for the chemical.

³ The signal word code is the number of the signal word in the signal word key in the SDS for the chemical.

⁴ The hazard, signal word and pictogram codes are used to identify the chemical in the SDS for the chemical.

⁵ The hazard, signal word and pictogram codes are used to identify the chemical in the SDS for the chemical.

⁶ The hazard, signal word and pictogram codes are used to identify the chemical in the SDS for the chemical.

⁷ The hazard, signal word and pictogram codes are used to identify the chemical in the SDS for the chemical.

⁸ The hazard, signal word and pictogram codes are used to identify the chemical in the SDS for the chemical.

⁹ The hazard, signal word and pictogram codes are used to identify the chemical in the SDS for the chemical.

¹⁰ The hazard, signal word and pictogram codes are used to identify the chemical in the SDS for the chemical.

Label Example

New style Label (GHS)



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

GHS Company, 123 Global Drive, Cincinnati, OH

telephone (800) 555-8888

Workplace Labeling

- OSHA is maintaining the approach used in the current HCS that allows employers to use workplace-specific labeling systems as long as they provide the required information.
- However, such workplace label systems may need to be updated to make sure the information is consistent with the new classifications.
- NFPA/HMIS Systems
 - (ratings systems v. classification)

Safety Data Sheets

Appendix D

- Identification
- Hazard identification
- Composition/information on ingredients
- First aid measures
- Firefighting measures
- Accidental release measures
- Handling and storage
- Exposure controls/personal protection (include exposure limits)
- Physical and chemical properties
- Stability and reactivity
- Toxicological information
- Ecological information
- Disposal considerations
- Transport information
- Regulatory information
- Other information

Updated HazCom Webpage





UNITED STATES
DEPARTMENT OF LABOR

[A to Z Index](#) | [En español](#) | [Contact Us](#) | [FAQs](#) | [About OSHA](#)

OSHA [OSHA QuickTakes](#) Newsletter [RSS Feeds](#) [Print This Page](#) [Text Size](#) [Was this page helpful?](#)

Occupational Safety & Health Administration **We Can Help** [What's New](#) | [Offices](#)

[Home](#) | [Workers](#) | [Regulations](#) | [Enforcement](#) | [Data & Statistics](#) | [Training](#) | [Publications](#) | [Newsroom](#) | [Small Business](#) 



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:

- [New!](#) Hazard Communication Wallet Card [\[PDF*](#), 5.7 MB]
- [New!](#) December 1, 2013 Training Requirements Fact Sheet [\[PDF*](#), 289 KB]
- [New!](#) 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/SCHC Alliance Webinar](#)
- [Downloadable Hazard Communications 2012 Presentation](#) [\[PPTX*](#),]
- [July 2013 OSHA/SCHC Alliance Webinar:](#) "Hazard Communication: 1 Year of Implementation"
- [Downloadable 2013 Hazard Communication Presentation](#) [\[PPTX*](#)
- [Question of the Month](#)

Thank You for Your Time

