

The Globally Harmonized System (GHS) of Classification and Labeling of Chemicals 29 CFR 1910.1200

Revised Hazard Communication Standard

Published in the *Federal Register* in March 2012 (77 FR 17574)

Why is the GHS needed?

- Labels vary from country to country and state to state
- United States – estimated 650,000 products
- Adoption of requirements
 - Better employee protection
 - Better trade/economics for companies
- International Mandate to harmonize – Brazil 1992
 - Adopted at the United Nations Conference on the Environment and Development



“A globally-harmonized hazard classification and compatible labeling system, including material safety data sheets and easily understandable symbols, should be available, if feasible, by the year 2000”



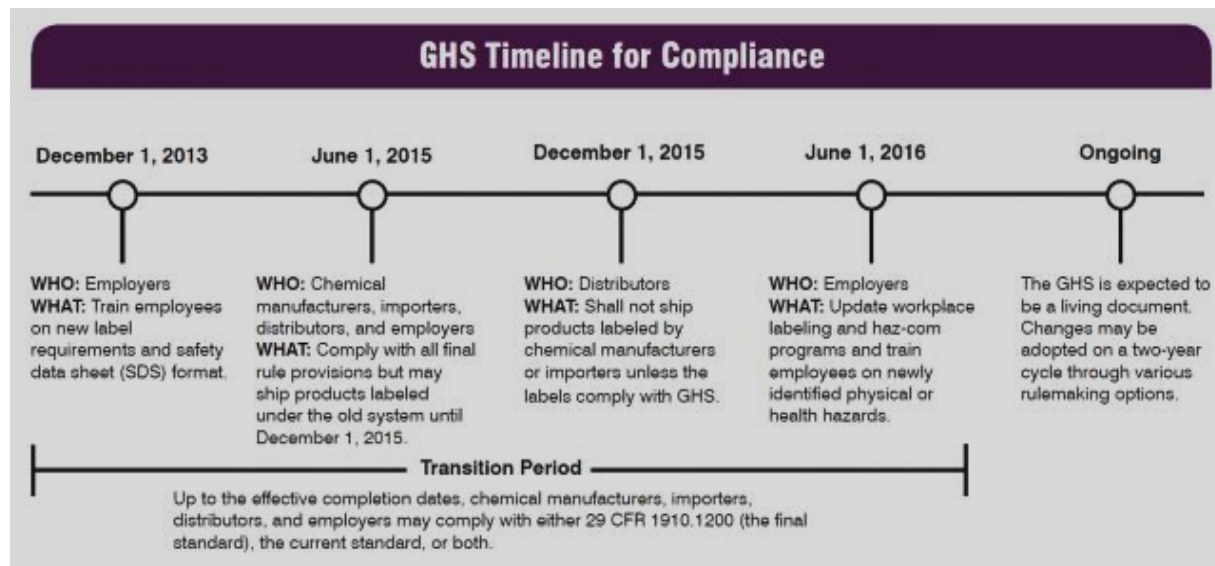
Significant Changes to the HazCom Standard

Three significant changes are contained in the revised Hazard Communication standard:

1. Standardized labeling elements
2. Standardized format for Safety Data Sheets (SDSs)
3. Use of pictograms to communicate specific hazard information

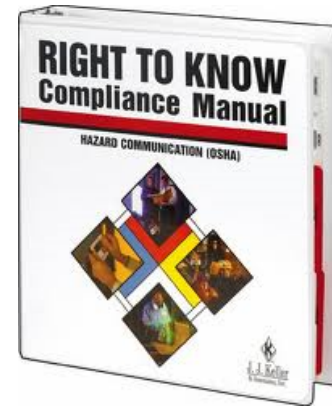
The basic goal of a GHS Hazard Communication Plan is to ensure employers and employees know about workplace hazardous substances and how to protect themselves; this should help to reduce the incidence of chemical source illnesses and injuries.

GHS & Revised Hazard Communication Effective Dates



TCCs Hazard Communication Program

- TCCs HAZCOM Program is a written document that can be found online at: <http://hq.msdsolnline.com/tidewaterccsl>
- Basic Program Elements
 - 1910.1200(d) Hazard Determination
 - 1910.1200(e) Written Program
 - 1910.1200(f) Labeling
 - 1910.1200(g) MSDSs
 - 1910.1200(h) Training





Hazardous Chemical Inventory List

- A list of hazardous substances used by each department at TCC is kept with Safety Data Sheets (SDSs) in the respective departments.
- A central database contains a listing of chemicals used at all campuses, and can be found at <http://hq.msdonline.com/tidewaterccsl>
- There are approximately 2900 products, chemicals, and/or substances in TCC online system



GHS Labeling & OSHA Required Labeling

- Standardization for all labels
- Reprocess of all labels in transit
- Enhance communication
 1. Product identifier
 2. Pictograms
 3. Signal Word "Danger"
 4. Hazard Statements
 5. Precautionary statements
 6. Supplier Information

- Effective date December 1, 2015


2 	1 Sulfuric Acid 3 Danger! May be harmful if swallowed. 4 Causes severe skin burns and eye damage. Fatal if inhaled. Harmful to aquatic life.	2 
5 Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.		
5 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.		
In case of fire Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.		
See Material Safety Data Sheet for further details regarding safe use of this product.		
6 Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA Telephone : +18003255832		
1 Product Identifier 2 Pictograms 3 Signal word, "Danger!"	4 Hazard Statements 5 Precautionary Statements 6 Supplier Information	

Standardized Label


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DOT and NFPA Labeling

NFPA DIAMOND



COLOR BAR



HEALTH HAZARD	FIRE HAZARD	REACTIVITY HAZARD	SPECIFIC HAZARD
4-Deadly	<i>Flash Points</i> 4-Below 73° F	4-May detonate	Oxidizer OXY
3-Extreme danger	3-Below 100° F	3-Shock and heat may detonate	Acid ACID
2-Hazardous	2-Below 200° F	2-Violent chemical change	Alkali ALK
1-Slightly hazardous	1-Above 200° F	1-Unstable if heated	Corrosive COR
0-Normal material	0-Will not burn	0-Stable	Use NO WATER Radiation Hazard 

RATING EXPLANATION GUIDE

HEALTH	FLAMMABLE	REACTIVE
Recommended Protection	Susceptibility to Burning	Susceptibility to Energy Release
4 Special full protective suit and breathing apparatus must be worn	4 Very flammable	4 May detonate under normal conditions
3 Full protective suit and breathing apparatus should be worn	3 Ignites under normal temperature conditions	3 May detonate with shock or heat
2 Breathing apparatus with full face mask should be worn	2 Ignites with moderate heating	2 Violent chemical change but does not detonate
1 Breathing apparatus may be worn	1 Ignites when preheated	1 Not stable if heated use precautions
0 No precautions necessary	0 Will not ignite	0 Normally stable

NFPA 704 Label

Chemical Labeling of Secondary Containers

- If a chemical is transferred from its original container, the **following information must be provided** on the secondary container if the chemical is not immediately used:
 - Complete chemical name (no abbreviations or chemical formulas)
 - Concentration & units of concentration, if it is not a pure compound.
 - Date of preparation
 - Initials of the preparer
 - Hazard warnings












Inappropriate labels

Samples of Properly Labeled Secondary Containers



GHS Pictograms

Hazard Symbols (to be used in pictograms for substances of the particular class)		
		
FLAME OVER CIRCLE—USED FOR THESE CLASSES : <ul style="list-style-type: none"> ▪ Oxidizers 	FLAME—USED FOR THESE CLASSES: <ul style="list-style-type: none"> ▪ Flammables ▪ Self Reactives ▪ Pyrophorics ▪ Self-Heating ▪ Emits Flammable Gas ▪ Organic Peroxides 	EXPLODING BOMB—USED FOR THESE CLASSES: <ul style="list-style-type: none"> ▪ Explosives ▪ Self Reactives ▪ Organic Peroxides
		
SKULL & CROSSBONES—USED FOR THESE CLASSES: <ul style="list-style-type: none"> ▪ Acute toxicity (severe) 	CORROSION—USED FOR THESE CLASSES: <ul style="list-style-type: none"> ▪ Corrosives 	GAS CYLINDER—USED FOR THESE CLASSES: <ul style="list-style-type: none"> ▪ Gases Under Pressure
		
HEALTH HAZARD—USED FOR THESE CLASSES: <ul style="list-style-type: none"> ▪ Carcinogen ▪ Respiratory Sensitizer ▪ Reproductive Toxicity ▪ Target Organ Toxicity ▪ Mutagenicity ▪ Aspiration Toxicity 	ENVIRONMENTAL HAZARD—USED FOR THESE CLASSES: <ul style="list-style-type: none"> ▪ Environmental Toxicity 	EXCLAMATION MARK—USED FOR THESE CLASSES: <ul style="list-style-type: none"> ▪ Irritant ▪ Dermal Sensitizer ▪ Acute toxicity (harmful) ▪ Narcotic Effects ▪ Respiratory Tract Irritation

DOT HazMat Pictograms

Required for shipping and transporting of hazardous materials

CLASS 1:
Explosives



CLASS 5:
Oxidizers
and
Organic
Peroxides



CLASS 2:
Gases



CLASS 6:
Poisonous
and
Etiologic
Materials



CLASS 3:
Flammable
Liquids



CLASS 7:
Radioactive
Materials



CLASS 4:
Flammable Solids,
Spontaneously
Combustible
Materials, and
Materials
That Are
Dangerous
When Wet



CLASS 8:
Corrosives



CLASS 9:
Miscellaneous
Hazardous
Materials



Safety Data Sheets (SDS)

Formerly called Material Safety Data Sheets (MSDS)

- GHS has changed the format for Safety Data Sheets – 16 standardized sections
- Each SDS is a document containing pertinent safety information regarding a product or substance. Every manufactured hazardous product, chemical or substance has its own SDS.
- Employers must have a SDS for each hazardous product, chemical or substance which they use.
- Supervisors are responsible for maintaining an SDS binder that contains a SDS for every product, chemical or substance currently in their department.
- A SDS for a product, chemical or substance must be immediately accessible to any employee.



Safety Data Sheets (SDS)

As of June 1, 2015, the Hazard Communication Standard will require SDSs to be in a standard format, to include 16 section numbers, specific headings, and associated information under each heading:

Section 1.	Identification
Section 2.	Hazard(s) identification
Section 3.	Composition/information on ingredients
Section 4.	First aid measures
Section 5.	Fire-fighting measures
Section 6.	Accidental release measures
Section 7.	Handling and storage
Section 8.	Exposures controls/personal protection
Section 9.	Physical and chemical properties
Section 10.	Stability and reactivity
Section 11.	Toxicological information
Section 12.	Ecological information*
Section 13.	Disposal considerations*
Section 14.	Transport information*
Section 15.	Regulatory information*
Section 16.	Other information

***Note: Since other Agencies (DOT, EPA, etc.) regulate this information, OSHA will not be enforcing Sections 12 through 15 (29 CFR 1910.1200(g)(2))**

Employee Information and Training

- Prior to starting work, new employees of TCC must have hazard communication training.
- Department directors and supervisors are responsible for organizing and conducting **position-specific training to all new employees** related to the hazardous products and substances used in their specific areas.
- Department supervisors are responsible for conducting **refresher training** for all employees under their supervision related to the hazardous materials used in their areas. This should be done annually if any hazards have changed (e.g. new products, chemical or substances in workplace).
- Each department will maintain an outline of the training provided and **documentation** of when the training was provided and to whom.

Employee Information and Training

If applicable, topics covered during position-specific training should include, but are not limited to:

- Labeling system and how to use it
- How to review SDSs and where they are kept
- Chemicals present in work operations
- Instructions on proper handling procedures, label checking, and SDS filing for new chemicals.
- Physical and health effects of hazardous chemicals in the area
- Methods and observation techniques used to determine the presence or release of hazardous chemicals in the area
- Personal protective equipment and other work practices
- Safety/emergency procedures to follow if exposure occurs

MSDSonline HQ - Viewer Quick Reference Guide

- ❖ **Accessing your Account:** <http://www.tcc.edu/security/> Then click on Occupational Safety – TCC
MSDSonline Information can be directly accessed on this page

Go to your organization's HQ link: <https://msdsmanagement.msdsonline.com/tidewaterccs/>

Please highlight this link, then copy and paste it into your browser's address bar.

- ❖ **To Search for an MSDS within your company:**

MSDS Search



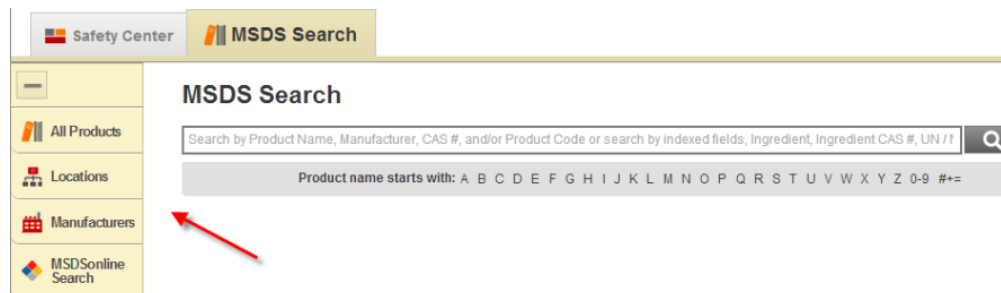
Search by Product Name, Manufacturer, CAS #, and/or Product Code or search by indexed fields, Ingredient, Ingredient CAS #, UN / I

Product name starts with: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0-9 #+=-

1. Type the product information into the single search field and click Search.

Hint: You can search for multiple types of data at once. For example, if you are searching for Acetone manufactured by Sigma, you can type in Acetone Sigma in the single search field to search for both product and manufacturer.

2. If you are not able to spell the product name, click on the 1st letter of the product name to search for documents that begin with that letter.



Safety Center **MSDS Search**

MSDS Search

Search by Product Name, Manufacturer, CAS #, and/or Product Code or search by indexed fields, Ingredient, Ingredient CAS #, UN / I

Product name starts with: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0-9 #+=-

All Products
Locations
Manufacturers
MSDSonline Search

1. To see a full display of documents by Product Name, by Location, or by Manufacturer, click on one of the tabs to the left of the search field.

❖ **Once the MSDS has been found:**



1. View the MSDS by selecting the PDF icon to the left of the Product Name. You can print or save the MSDS after viewing the PDF.
2. View the summary of the MSDS by selecting the Summary icon next to the PDF.
3. Print labels for secondary containers by selecting the Label icon next to the Summary.
 - a) Choose your label b) Select the data fields you would like to include on your label c) Select "Generate Label"
 -
4. View Attached Files by selecting the paper clip icon next to the Label.

If you are not able to find a document in your company's database, you will be prompted to either search MSDSonline for the document (where you can then view the MSDS and/or add it to the company database) or use the request tool to obtain an MSDS from your Administrator.

QUESTIONS

Please contact

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