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REVISED HAZARDOUS COMMUNICATIONS STANDARD

On March 26, 2012, OSHA's final revised Hazard Communication Standard was published in the Federal Register

Haz Com is now aligned with GHS

GHS

The Globally Harmonized System (GHS) is an international approach to hazard communication, providing agreed criteria for the classification of chemical hazards, and a standardized approach to label elements and safety data sheets. The GHS provides harmonized classification criteria for health, physical, and environmental hazards of chemicals. As of right now OSHA has not included the environmental hazards in the Haz Com standard



WHY GHS?

Currently, throughout the world there exist inconsistencies between the various (national and regional) systems that control the classification of chemicals. GHS began as a result of the recognition by the United Nations (UN) for the need to harmonize these separate systems between the countries, and even within individual countries. It is meant to "harmonize" existing systems by establishing a unique system for identifying hazardous materials and giving warnings to users.

It is hoped that GHS will improve safety, decrease supplier costs, and generally make international shipment and sales of chemical products easier, as well as ensure that people worldwide receive the same basic standard of protection when using these products.

UN Published GHS is known as the Purple Book.

WHO IS AFFECTED BY GHS?

GHS affects any company who has chemicals in the workplace. All employers with hazardous chemicals in their workplaces must have labels and safety data sheets for their exposed workers, and train them to handle the chemicals appropriately.

WHAT ABOUT GHS AND DEPARTMENT OF TRANSPORTATION (DOT)

GHS is a workplace rule, although some of the classification changes, for flammables, toxics and environmental hazards have been somewhat aligned in the regulations (e.g. International Maritime Dangerous Goods (IMDG))

MAJOR CHANGES

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.



Hazard classification: The definitions of hazard have been changed to provide specific criteria for classification of health and physical hazards, as well as classification of mixtures. These specific criteria will help to ensure that evaluations of hazardous effects are consistent across manufacturers, and that labels and safety data sheets are more accurate as a result.

Safety Data Sheets: SDSs will now have a specified 16-section format.

CHEMICAL HAZARD EVALUATION

The revised Haz Com standard has specific criteria for each health and physical hazard, along with detailed instructions for hazard evaluation and determinations for classifying chemical substances and mixtures. It also establishes both hazard categories and classes for many of the effects; the classes are divided into categories that reflect the relative severity of the effect.

HOW WILL THE NEW HAZ COM STANDARD PHASE-IN?

Must be completed by:

December 1, 2013 — Train employees on the new label elements and safety data sheet (SDS) format.

June 1, 2015 — Compliance with all modified provisions of the final rule, except:

December 1, 2015 — Distributors shall not ship containers of hazardous materials labeled by the chemical manufacturer or importer unless it carries the appropriate Haz Com label.

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.



During the transition period, employers may comply with the existing standard, the revised standard, or both. Each state's existing requirements will continue to be in effect until it adopts the required revisions.

DO ALL EMPLOYEES NEED TO BE TRAINED?

OSHA believes that effective training is a key part of hazard communication. All employees must be informed of the presence of hazardous chemicals and the operations where they are used in the work place. While written information is important, as in the specific workplace implementation of the program (the location of the SDS, chemical list, workplace labeling system, etc.), it is training that provides an opportunity to explain specific data, measures to detect, procedures to follow and equipment that workers can use to protect themselves from these hazards.

The revised standard continues this same effort, but emphasizes the need to train specifically on the new label elements and the format of the SDS. Training is required at the time of their initial work assignment and whenever new chemical hazards for which the employee has not been trained are introduced into their work area.

WILL MY CURRENT MSDS SHEETS NEED TO BE UPDATED?

Yes, the HAZCOM 2012 SDS will be a 16-section document. In addition, your product will need to be reclassified under the GHS system.

GHS system has revised Safety Data Sheet (SDS), or MSDS, requirements.

GHS 16-section format for the SDS is as follows:

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 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

DOES ALL THIS APPLY TO AN OFFICE SETTING?

Office workers who encounter hazardous chemicals only in isolated instances are not covered by the rule. OSHA considers most office products (such as pens, pencils, adhesive tape) to be exempt under the provisions of the rule, either as articles or as consumer products. For example, OSHA has previously stated that intermittent or occasional use of a copying machine does not result in coverage under the rule. However, if an employee handles the chemicals to service the machine, or operates it for long periods of time, then the program would have to be applied.

HOW WILL LABELS CHANGE UNDER THE REVISED STANDARD?

Under the revised Haz Com Standard, once the hazard classification is completed, the standard specifies what information is to be provided for each hazard class and category. Labels will require the following elements:

Pictogram: a symbol on a white background within a red diamond. There are nine pictograms under the GHS. However, only eight pictograms are required under the Haz Com Standard.

Signal words: a single word on the label used to indicate the relative level of severity of a hazard and alert the reader to a potential hazard. The signal words used are "Danger" for the more severe hazards, while "Warning" is used for less severe hazards.

Hazard Statement: 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: Highly flammable liquid and vapor.)



Precautionary Statement: a phrase that describes recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical. This may also include proper storage or handling of a hazardous chemical, and first aid instructions.

Chemical manufacturers, importers, and distributors must label containers of hazardous chemicals with the identity of the chemical, appropriate hazard warnings, and the name and address of the manufacturer or other responsible party.

GHS PICTOGRAMS & HAZARDS

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. Below are the modified Hazard Communication Standard (HCS) labels in conformance with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Each pictogram consists of a symbol on a white background framed with a red border and represents a chemical hazard(s). The pictograms on the label is determined by the observed toxic identification.

CORROSION • Skin Corrosion/Irritation • Eye Damage • Corrosive to Metals	EXCLAMATION MARK • Irritant (Skin and Eye) • Non-Hazardous • Acute Toxicity (Oral, Dermal, Inhalation) • Hazardous (Very Irritant) • Irritant to Skin (Very Irritant) • Irritant to Skin (Less Irritant)	EXPLODING BOMB • Explosives • Self-Reacting • Organic Peroxides
SKULL & CROSSBONES • Acute Toxicity (Oral or Dermal)	FLAME • Flammable Gases • Flammable Liquids • Flammable Solids • Oxidizing Gases • Oxidizing Liquids • Oxidizing Solids • Self-Heating • Highly Flammable Gases • Self-Heating Liquids • Self-Heating Solids • Self-Heating Substances	GAS CYLINDER • Gases Under Pressure
ENVIRONMENT (Non-Mandatory) • Aquatic Toxicity	HEALTH HAZARD • Carcinogen • Respiratory Sensitizer • Reproductive Toxicity • Target Organ Toxicity • Acute Toxicity (Inhalation) • Acute Toxicity (Inhalation) • Acute Toxicity (Inhalation)	FLAME OVER CIRCLE • Corrosive



2	1 Sulfuric Acid	2
3 Danger! May be harmful if swallowed. Causes severe skin burns and eye damage. Fatal if inhaled. Harmful to aquatic life.		
4	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	4 Hazard Statements	
2 Pictograms	5 Precautionary Statements	
3 Signal word, "Danger!"	6 Supplier Information	



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EXISTING CONTAINERS AND THE NEW REQUIREMENTS

Chemical manufacturers, importers, distributors, and employers who become newly aware of any significant information regarding the hazards of a chemical must revise the labels for the chemical within six months of becoming aware of the new information and must ensure that labels on containers of hazardous chemicals shipped after that time contain the new information.

OSHA says that chemical manufacturers, importers, distributors, and employers must be in compliance with all modified provisions of the Hazard Communication Standard no later than June 1, 2015, except:

Distributors have until December 1, 2015, to ensure that containers labeled by the chemical manufacturer or importer are not shipped unless the label has been modified to comply with GHS format for container labels.

All employers have until June 1, 2016, to update any alternative in-house labeling such as signs, placards, process sheets, batch tickets, operating procedures, or other written materials used to convey hazard information; update their hazard communication program; and provide any additional employee training in accordance for newly identified physical or health hazards.

Hazardous chemicals in pipes do not need to be labeled.



SUMMARY HAZCOM/GHS COMPARISON

Written Program - Because OSHA has indicated it will retain the provisions of HAZCOM that are not affected by the GHS, the written program is expected to be largely unchanged. It will, however, need to be modified to include any resulting changes to labeling and (M)SDS communication as well as related employee training.

(M)SDS - the (M)SDS will experience extensive change after adoption of the GHS, as all products will need to be classified for health and physical hazards based on GHS criteria. The title of the document will also likely be changed to Safety Data Sheet (SDS).

Additionally, the flexibility of the format will be removed; the 16 section document (as adopted by ANSI Z400.1-2004) will be required. The order of the 16 sections will be specified; with section two being for hazard identification and section three being for components. The consistent format will greatly assist employees in quickly and easily finding their information on the (M)SDS.

Labeling - the GHS will require standardization for all labels which will result in a reprocessing of every label during transition. Standardized pictograms, signal words, hazard statements, and precautionary statements are specifically designed to enhance communication for all those handling chemicals. These elements will also need to be placed on the label in specified locations.

Training - educating employees on the label and (M)SDS changes due to the updated product classifications, pictograms, signal words, and hazard and precautionary statements will represent the greatest training challenge. From a process standpoint, training managers should plan to follow the existing HAZCOM requirements, as the current training procedures are more detailed than the GHS training recommendations and will likely be retained.



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The GHS adoption is set up in a building block fashion, meaning each agency can choose to apply the elements of the GHS that they feel most benefit their needs and audience. When OSHA establishes the final rule, it will be imperative that you understand which portions of the GHS have been incorporated. It is anticipated that most of the GHS elements will be adopted by OSHA with respect to labeling and MSDS format.

REMEMBER



IMPORTANT DATES FOR GHS COMPLIANCE:

Dec. 1, 2013:
Employees
must be trained on
label requirements
and the new
safety data sheet

June 1, 2015:
**Chemical
manufacturers**
must comply with
all final rule
provisions of the
regulation

Dec. 1, 2015:
**Chemical
distributors**
must ship
containers using
GHS-compliant
labels

June 1, 2016:
**Workplace
employers**
must update labeling
and HazCom
programs and provide
ongoing training

For employee training and for assistance in revising your existing Haz Com written plan or for the development of a new Haz Com Written Plan:

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