

# J.M. Miller Engineering

- Chemical Warnings, Labeling & (M)SDS • Fires and Explosions • Chemical Contamination & Disposal
- Agricultural Chemical Safety • Industrial Chemical Process Accidents & Subrogation

## OSHA MANDATES CHANGES TO ALL MSDS & LABELS

**December 2013 Deadline: Employee GHS Awareness Training**

**June 2015 Deadline: New Chemical (M)SDS & Labels**

### GHS History

The United Nations set the goal of harmonizing the separate chemical information systems among countries. The UN then created subcommittees which developed the Globally Harmonized System (GHS). Governments around the world are expected to utilize the system to establish requirements within their own regulatory environment so that chemical data globally exchanged will look similar.

### The U.S. Government Responded Accordingly

In March 2012, OSHA changed its HazCom regulations under 29 CFR 1910.1200 to reflect Globally Harmonized System (GHS) Formats. The switch to GHS impacts every employer in the U.S. by establishing new rules for hazardous chemicals in transportation, workplace use, and consumer use.

## Key Points of Change Include

1. New Chemical Classification System
2. New Hazard Symbols
3. New Labels and Labeling Requirements
4. Replacement of Material Safety Data Sheets (MSDS) with Safety Data Sheets (SDS)
5. Employee Training

### 1. New Chemical Classifications

Chemical substances and mixtures must be newly "classified" under GHS. Supplements provided with 29 CFR 1910.1200 aid in GHS classification. The GHS classifies chemicals based on physical, health, and environmental qualities. See the list of classifications to the right.

### NEW GHS Classifications

#### Physical Hazards

- Explosives
- Flammable Gases
- Flammable Aerosols
- Oxidizing Gases
- Gases Under Pressure
- Flammable Liquids
- Flammable Solids
- Self-Reactive
- Self-Heating
- Pyrophoric Liquids
- Pyrophoric Solids
- Oxidizing Liquids
- Oxidizing Solids
- Organic Peroxides

#### Health Hazards

- Acute Toxicity: Oral, Dermal, Inhalation
- Skin Corrosion/ Irritation
- Eye Damage/ Irritation
- Sensitization: Respiratory, Skin
- Germ Cell Mutagenicity
- Carcinogenicity
- Reproductive Toxicity
- STOT – SE, RE
- Aspiration Hazard

#### Environmental Hazards

- Hazardous to the Aquatic Environment: Acute, Chronic

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## 2. New Hazard Symbols

GHS defines pictograms to be used based on a substance's classification. See examples to the right.

## 3. New Labels and Labeling Requirements

Under GHS, labels must contain:

- (a) signal words,
- (b) hazard statements,
- (c) precautionary statements, &
- (d) pictograms appropriate to the product's classification.

## 4. Replacement of MSDS with SDS

OSHA's old standard specified what information was to be included on the MSDS, but did not specify a format or order of information. The Safety Data Sheets (SDS) replacing MSDS have a strict order of information.

## 5. Employee Training

To educate your employees on the switch to GHS, OSHA requires training on the elements of the new system by December 1, 2013.

# What We Can Do to Assist You

**Conversion:** Of your labels and SDS to the new GHS Format

(In most cases, our evaluations and conversions can be completed within two weeks.)

**Evaluation:** Of your labels and SDS to the new HazCom Standard

**Training Program:** Providing illustrated/narrated employee programs

**Litigation Defense:** We can provide reports and testimony relative to the compliance of your Labels and (M)SDS with the HazCom Standard

## Professional Staff

Our registered engineers with PhD principals have over sixty years experience in book authoring, label creation, MSDS evaluation and expert testimony.

**Examples:** See [www.millerengineering.com](http://www.millerengineering.com) for Label & MSDS work product examples, and select litigation cases.

## Some Chemical Manufacturers for whom we have evaluated or provided consultation on product labels and/or (M)SDS:

- Dow Chemical
- Glitsa
- Mallinckrodt Baker
- Conap
- Ashland Chemical
- PPG
- Vulcan Chemical
- Occidental Chemical
- Fisher Scientific
- Hexel
- Monsanto Chemical

## GHS Pictograms

Explosive:



Flammable:



Oxidizing:



Compressed Gas:



Corrosive:



Acute Toxicity:



Irritant:



Health Hazard:



Environmental:

