

The Right to Understand: OSHA/ANSI Standards for Chemical Safety

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Outline

- Brief History of Workplace Safety in the U.S.
- The beginning of OSHA and Chemical Safety
- Hazard Communication
 - Globally Harmonized System (GHS) updates
- The new ANSI standard for Safe Use of Cleaning Chemicals

Worker Safety In the U.S.

- Pre 1900's: Workers had very few rights
- Unsafe Conditions-take it or leave it
- Injured Worker Recourse - sue employer
- Employer Defense -
 - Contributory Negligence
 - Fellow Employee Caused Accident
 - Assumption of Risk

The Industrial Revolution and Workers Compensation

- The Industrial Revolution resulted in many unsafe working conditions and many life-changing injuries and workplace fatalities
- In the early 1900s several states passed Workers Compensation laws
 - 1917 State of Utah



Why Workers Compensation?

- Fair and fast remedy for injured workers
- Fair and “reasonable” limit to liability for employers (“exclusive remedy”)
- Limit the need for litigation
- Provided some incentive for employers to make the workplace safer

Early 1970s

- About 14,000 workplace fatalities (estimated 1970)
- “The Congress finds that personal injuries and illnesses arising out of work situations impose a substantial burden upon, and are a hindrance to, interstate commerce in terms of lost production, wage loss, medical expenses, and disability compensation payments”

OSHA is Created

- On December 29, 1970, President Nixon signed the Occupational Safety and Health Act of 1970 (OSH Act) into law.
- This Act created OSHA, the agency, which formally came into being on April 28, 1971

OSHA's General Duty Clause:

Duties Sec. 5

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(a) Each **employer** - (1) shall furnish to each of his employees employment and a place of employment which are **free from recognized hazards** that are **causing or are likely to cause** death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

The OSHA Hazcom Standard

- The initial OSHA regulations did not include a specific chemical safety standard
 - Chemical hazards covered under General Duty Clause
- Stefan Golab, February 10, 1983

Hazard Communication Standard

- Enacted November 25, 1983
- Scope originally applied to the manufacturing industry
- 1987 scope expanded to include all industries including construction
- Known as the worker “right to know” std


Hazard Communication Requirements

29 CFR 1910.1200

- Chemical Evaluation by Manufacturer
- Material Safety Data Sheets (MSDS)
 - Developed by chemical manufacturer
 - Kept readily accessible by employer
- Labeling
- Training
 - Initially
 - When a new chemical hazard is introduced

Globally Harmonized System of Classification and Labeling of Chemicals

- Adopted by the United Nations in 2003
 - First Edition Published (purple book)
- In 2009 OSHA published a proposed rulemaking to align the Hazcom standard with the GHS
- Final Rule published in Federal Register 2012
 - Effective date: May 26, 2012
- Also termed worker “right to understand”



**Globally Harmonized System of
Classification and Labelling of
Chemicals (GHS)**



UNITED NATIONS

The Hazard Communication Standard



- Information about the identities and hazards of the chemicals must be available and understandable to workers.

Globally Harmonized System (GHS)

Key Implementation Dates

- December 1, 2013-Employers must train employees on the new labeling/SDS
 - 9 pictograms, signal words, hazard warnings
 - New 16 section SDS format
- June 1, 2015-Manufacturers to comply with the new labeling and SDS requirements
- June 1, 2016 Employers must comply with all of the standard

Key GHS changes

- New SDS format
 - M dropped from MSDS
 - 16 section standardized format
- Pictograms and other labeling requirements
 - Fewer words on label, more symbols
- Training

Safety Data Sheets

- The format of the 16-section SDS should include the following sections:

Section	Section
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, including date of preparation or last revision

Label Pictograms



Figure 3: HazCom 2012 Pictograms

<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)

Source: OSHA

The new ANSI standard for safe use of cleaning chemicals

- SI BSR SI-001 - 2016 Safe Use of Cleaning Chemicals
- Workbook

Isn't the hazcom standard good enough for the cleaning industry?

- The new ANSI Standard is not a replacement for the hazcom standard
- Provides more specific information focusing on the cleaning industry
- GHS/Hazcom 2012 updates are good, but there is still room for improvement

How is Safe Use of Cleaning Chemicals an improvement over hazcom?

- Assignment of Chemical Safety Responsibilities
- Training
- Control Measures
- Chemical Handling
- Personal Protective Equipment

Safe Use of Cleaning Chemicals: Assignment of Safety Responsibilities

- Management
- Cleaning Chemical Handling Personnel (CCHP)
- Supervisors
- Cleaning Chemical Safety Officer (CCSO)

Safe Use of Cleaning Chemicals: Training

- Initial training with hourly requirements
- Workbook
- Annual Refresher training with hourly requirements
- Specific training for users, supervisors, safety officers

Safe Use of Cleaning Chemicals: Chemical Handling Control Measures

- Elimination of highly hazardous chemicals
- Standard Operating Procedures
- Dispensing Equipment
- Mixing of incompatible materials

Safe Use of Cleaning Chemicals: Personal Protective Equipment

- Hazard Assessment
- Training
- Addresses common types of PPE, payment, and use (including voluntary use)

How can Safe Use of Cleaning Chemicals help your organization?

- Compliance with hazcom standard
- Hazcom is still among the most frequently cited standards by OSHA (2016-2017)
 - #1 for cleaning industry (Janitorial Services)
 - #2 for all industries
- Fewer chemical related accidents
- Protecting your organization's greatest asset

Questions / Comments?



Thank You!