

Navigating Hazard Communication and Chemical Hygiene Standards



Stanton Stubbs, CSP, CHMM, CHO
sstubbs@keenan.com



Leslie Heaviside, REHS
lheaviside@keenan.com

Agenda

- Introduction
- Written Plans
 - Hazard Communication Standard
 - Laboratory Standard (Chemical Hygiene Plan)
- Safety Data Sheets
- Labeling
- Inventories
- Training
- Chemical Hygiene Officer
- Standard Operating Procedures



Introduction

Comparing Hazard Communication Standard and Laboratory Standard:

- **Hazard Communication Standard** informs employees working with hazardous chemicals, so they understand the risks associated.
- **Laboratory Standard** is created for laboratory use for relatively small-scale operations. Hazards are so different in type and use of chemicals requires additional steps to understand risks and controls.



Introduction: Standard Hierarchy

- Hazard Communication Standard is the base program for ALL business engaged in the use of hazardous chemicals. This standard was first then came the Chemical Hygiene Standard.
- Chemical Hygiene Standard is the next layer of safety if engaged in Laboratory Scale use of hazardous chemicals.
 - Laboratory Scale is defined as “work with substances in which the containers used for reactions, transfers, and other handling of substances are designed to be easily and safely manipulated by one person. Excludes commercial production quantities.



Introduction: Comparison of the Standards

	HAZARD COMMUNICATION	CHEMICAL HYGIENE
Safety Data Sheets	Required ((b)(1)(2))	Required ((h)(1)(B)) only ones provided with supplied chemical (not for reactions)
Labeling	Required ((f)(6))	Required ((h)(2)(C))
Inventories	Required ((e) (1) (A))	Recommended (Appendix A)
Training	Required ((h))	Required ((f))
Chemical Hygiene Officer	Not Required	Required ((e)(3)(G))
Standard Operating Procedures	Not Required	Required ((e)(3)(A))

Note: Items in parentheses are specific sections to CCR.

Written Plans

Both standards are similar in that they **require** the employer make a written plan for each:

- **CCR Title 8, Section 5194 (e)(1)**
 - Requires written Hazard Communication Program
- **CCR Title 8, Section 5191 (e)(1)**
 - Requires written Chemical Hygiene Plan



Written Plans: Hazard Communication Standard

- **Is known as the “Right to Know” and was recently updated to the “Right to Understand”**
- **Mandates that employers:**
 - Maintain safety data sheets
 - Provide training about chemical safety, safe handling, storage and emergency procedures
 - Inform employees about the hazards of chemicals and what chemicals they are exposed to when working (important to keep an accurate inventory)

Written Plans: Hazard Communication Standard

- **Updated to include the Global Harmonized System of Labeling and Classification otherwise known as GHS.**
- **GHS main changes are in:**
 - Safety data sheets (SDS)
 - Hazard classification
 - Labels
 - Warning/danger signage



Written Plans: Hazard Communication Program

- Responsibilities
- List of hazardous chemicals
- Safety data sheets
- Labels and other forms of warning
- Employee information and training
- Hazardous non-routine tasks
- Contractors and temporary employees

Written Plans: Hazard Communication Standard

Important distinction for standard:

- An employee whose duties involve routine work with hazardous chemicals and may be exposed under **normal conditions** are covered.
- **Normal conditions** does not mean incidental exposure.
 - Employee's job duties such as those working in an office environment that involves non-routine use of chemicals are not required.

Written Plans: Chemical Hygiene Plan

- During their inspections, Regulatory Inspectors are requesting if Chemical Hygiene Plans are available.
- Science Safety Handbook for California Schools references the need to comply with CCR, Title 8, General Industry Safety Orders, Section 5191. That covers occupational exposure to hazardous chemicals in laboratories. (*Chapter 1, section D: Reducing Risks of Injury and Liability.*)



Written Plans: Chemical Hygiene Plan

Guidance to develop a Chemical Hygiene Plan (CHP) are available in Appendix A of the California Code of Regulations (CCR)

Title 8 Section 5191 and include:

- General principles controlling exposures
- Responsibilities
- Laboratory facility
- Components of the CHP
- General procedures for working with chemicals

Written Plans: Chemical Hygiene Plan

Components of a Chemical Hygiene Plan include:

- Basic Rules and Procedures
- Chemical Procurement, Distribution, and Storage
- Environmental Monitoring
- Housekeeping, Maintenance and Inspections
- Medical Program
- Personal Protective Equipment
- Records
- Signs and Labels
- Spills and Accidents
- Training and Information
- Waste Disposal

Written Plans: An Important Difference

- Chemical Hygiene Plan is required to be reviewed annually for effectiveness
- Hazard Communication Plan is required to be “maintained”



Safety Data Sheets

Hazard Communication Standard

- Hazard communication or “Right to Know/Understand” requires employer to inform employees about the hazardous characteristics (toxic, corrosive, flammable, etc...) chemicals they may be exposed to.
- Maintain a safety data sheet with immediate and easy access.
(Hardcopies not required; must be easily accessible)

Chemical Hygiene Standard

- (b) Employers shall maintain in the workplace any safety data sheets that are received with incoming shipments of hazardous chemicals and ensure that they are readily accessible to laboratory employees during each work shift when they are in their work area.

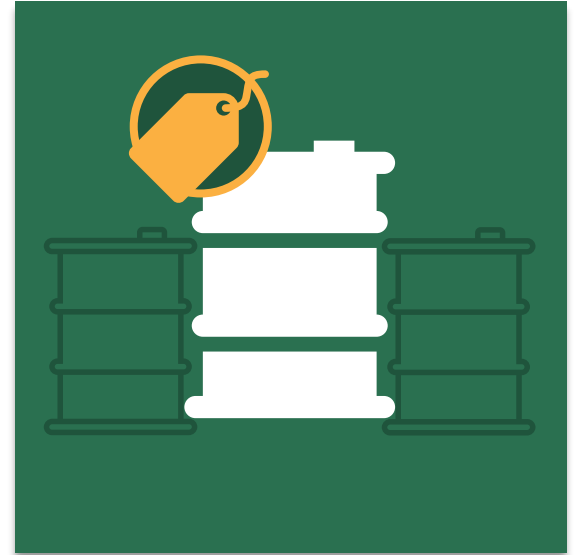
Labeling

Hazard Communication Standard – addressing secondary containers.

- Chemical Labels from manufactures must include 6 elements:
 - Product Identifier
 - Signal Word
 - Hazard Statement(s)
 - Pictogram(s)
 - Precautionary Statement(s)
 - Name, address, and telephone number of manufacturer, importer of other responsible party.
- Secondary Containers of chemicals can use the 6 elements above or the Product identifier (Name of chemical) and its hazard characteristic (Toxic, corrosive, flammable, etc...) (Title 8, 5194 (f)(6))

Labeling

Chemical Hygiene Standard – (h) While it doesn't specifically address secondary containers, it does require following hazards communication standard and is covered in the Non-Mandatory Appendix A example plan.



Labeling – Pictograms



Explosive



Flammable



Gas Under
Pressure



Corrosive



Oxidizer



Irritant



Acute
Toxicity



Health Hazard



Environment
Non-Mandatory

Inventories

Required for Hazard Communication Program

A list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet. The list may be compiled for the workplace as a whole or for individual work areas. Title 8, 5194 ((e)(1)(A))

Recommended for Chemical Hygiene (Appendix A)

Select carcinogens, reproductive toxins and substance with high degree of acute toxicity need special considerations. I suggest having clients identify and list these chemicals to inform their employees. Title 8, 5191(e)(3)(H)

Inventories

Unified School Districts (K-12) and Restricted Chemicals

- Science Safety Handbook for California Public Schools
 - Table 7.1: Chemicals Causing the Most Common Accidents in Schools
 - Table 7.2: Explosive Chemicals for Immediate Disposal
 - Table 7.3: Extremely Hazardous Chemicals Requiring Prompt Disposal
- The American Chemical Society's Joint Board-Council on Chemicals Safety (CCS)
 - List of Suggested Restricted-Use Chemicals

Inventories: Methylene Chloride Ban

- Methylene Chloride also called Dichloromethane (DCM)
- Ban is primarily for commercial use
- Laboratory usage is permitted under certain conditions
 - Workplace Chemical Protection Program
 - Initial monitor by May 5, 2025
 - Ensure new exposure levels are met and provide protection, if applicable, by August 1, 2025
 - Develop and implement Exposure Control Plan by October 30, 2025
 - Other monitoring required
- Used at Community College Districts and is a restricted chemical for Unified School Districts.

Training

Hazard Communication Standard (CCR Title 8, 5194 (h))

- Its all about the employee's "Right to Know" and employer's responsibility to provide training for the employee ("Right to Understand").
- Employer needs to inform employees of the hazards around chemical(s) they work with, are exposed to, and how to recognize them.
- Provide training around chemical safe handling and emergency procedures.
- Provide safety data sheets (SDS) – keep current and have them readily accessible, along with ensuring containers of hazardous chemicals have labels.

Training

Laboratory Standard (Chemical Hygiene) (CCR Title 8, 5191 (f))

- Trainings are required under Hazard Communication Standard
- Contents of Laboratory Standard are known as “**Occupational Exposure to Hazardous Chemicals in Laboratories**”
- Details of plan, location and availability
- Signs and symptoms associated with chemicals used in laboratory
- Methods and observations that may be used to detect presence or release
- Measures employees can take to protect from hazards, such as work engineering (fume hoods), work practices, Personal Protective Equipment (PPE) and emergency procedures.

Training

Laboratory Standard (Chemical Hygiene) – details of plan and summary of specific trainings may include:

- Standard Operating Procedures (SOPs)
- Conduct hazard assessments
- Laboratory exposure controls
- Proper use of equipment used in laboratories
- Storage of chemicals
- Biological and chemical waste disposal
- Spill response and emergency preparedness

Training

CUPA Inspections and Findings

- Southern California CUPAs are beginning to ask for records for these trainings
- **Haz Comm** – general employees as well as specialized classes such as ceramics and shops
- **Chemical Hygiene** – science staff

Chemical Hygiene Officer

Required for Chemical Hygiene Plan Title 8, 5191 (e)(3)(G)

(G) Designation of personnel responsible for implementation of the Chemical Hygiene Plan including the assignment of a Chemical Hygiene officer and, if appropriate, establishment of a Chemical Hygiene Committee

Recommend a responsible person for written plan updates and training for Hazard Communication Program

Standard Operating Procedures

Required for Chemical Hygiene Plan Title 8, 5191 (e)(3)(A)

- (3) The Chemical Hygiene Plan shall include each of the following elements and shall indicate specific measures that the employer will take to ensure laboratory employee protection;
- (A) Standard Operating Procedures relevant to safety and health considerations to be followed when laboratory work involves the use of hazardous chemicals

While SOPs are not required for the Hazard Communication Standard it does require “Methods” to inform employees in Title 8, 5194 (e) “**Written Hazard Communication Program**” sub sections.



QUESTIONS?

Disclaimer – Keenan is an insurance brokerage and consulting firm. It is not a law firm or an accounting firm. We do not give legal advice or tax advice and neither this presentation, the answers provided during the Question and Answer period, nor the documents accompanying this presentation constitutes or should be construed as legal or tax advice. You are advised to follow up with your own legal counsel and/or tax advisor to discuss how this information affects you.

Resources



- California Department of Education Science Safety (<https://www.cde.ca.gov/ci/pl/sciencesafety.asp>)
- Science Safety Handbook for California Public Schools 2014 edition (<https://ocsef.org/wp-content/uploads/2020/05/CA-Sci-Safety-Handbook-2014.pdf>)
- California Code of Regulations (CCR) Title 8 Section 5194 Hazard Communication (<https://www.dir.ca.gov/title8/5194.html>)
- Cal/OSHA Hazard Communication Regulation Guide for Employers that Use Hazardous Chemicals (https://www.dir.ca.gov/dosh/dosh_publications/hazcom.pdf)
- California Code of Regulations (CCR) Title 8 Section 5191 Occupational Exposure to Hazardous Chemicals in Laboratories (<https://www.dir.ca.gov/title8/5191.html>)
- California Code of Regulations (CCR) Title 8 Section 5191 Occupational Exposure to Hazardous Chemicals in Laboratories, Appendix A - Recommendations Concerning Chemical Hygiene in Laboratories (<https://www.dir.ca.gov/title8/5191a.html>)
- Methylene Chloride Ban TSCA Website (<https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-methylene-chloride>)
- Methylene Chloride Fact Sheet (https://www.epa.gov/system/files/documents/2024-07/mecl-fact-sheet_0.pdf)



Thank you for your participation!

Keenan[®]

Keenan[®]

WEBINAR SERIES

Solutions for the 21st Century

Keenan & Associates | CA License # 0451271