Chapter 53: Chemical Safety

Hazard Communication Requirements

1 Purpose

The purpose of these requirements is to ensure workers are properly informed of chemical hazards they may encounter. They cover hazard communication, including safety data sheets, inventories, labeling, and training. Hazard communication requirements are mandatory for workers who may be exposed to chemicals and other hazardous materials in their work area. These requirements apply to workers (as chemical workers), supervisors, area and building managers, and chemical storage asset custodians.

2 Requirements

Supervisors of chemical workers must ensure that hazards are communicated to them. Hazard communication will include

1. Ensuring a safety data sheet (SDS) on each chemical used or stored in their work areas is available
2. Ensuring that lists of chemicals known to be present in their work areas are available. This can be accomplished through local inventories and/or SLAC-wide inventory maintained in the Chemical Management System.
3. Ensuring chemicals are properly labeled
4. Ensuring training is provided on all classes of chemical hazards that chemical workers may reasonably be exposed to in their work areas
5. Ensures the use of valid job safety analyses (JSAs) or standard operating procedures (SOPs)

2.1 Safety Data Sheets

A current safety data sheet (SDS) for each chemical used or stored will be available to all personnel through the Chemical Management System. Supervisors will ensure all workers, in areas where chemicals are used or stored, have ready access.

Note  Subcontractors are responsible for maintaining SDSs for chemicals they bring to SLAC and making these available to supervisors of SLAC workers who may be exposed to those chemicals. For hazards located in SLAC areas where subcontractors will be working, the project manager or field construction/service manager must provide hazard communication information.
2.2 Inventories

A hazard communication inventory is a list of all hazardous chemicals present in a work area or workplace and is used to ensure that an SDS is available for each. They can be generated using the Chemical Management System or manually. Individual work areas should maintain local inventories of hazardous chemicals. Contact the chemical coordinator for more information on how to create and maintain a work-area specific inventory. (See Chemical Lifecycle Management: Management and Use Requirements.)

**Important** The inventory is particularly important if hazardous chemicals are moved from the storage area indicated at the time of delivery or if the area has materials obtained outside the CMS system, such as legacy materials obtained before 2006 or research samples.

2.3 Container Labeling

Chemical containers will be labeled meeting the following requirements:

- Every container will be clearly labeled with the material name and hazard information. Required (8 CCR 5194) label elements on shipped containers include the following:
  - Product identifier
  - Signal word
  - Hazard statements
  - Pictograms
  - Precautionary statements
  - Name, address, and telephone number of the manufacturer, importer, or other responsible party

- Manufacturer-affixed labels must not be removed or defaced on the primary chemical container if it still contains the chemical. If a container label is missing or illegible, or if the chemical is transferred into a secondary container, a secondary label must be affixed. These are available through the CMS Coordinator.

- Samples and small secondary chemical containers must be labeled with the chemical name or product identifier, and hazard information, where words, pictures, symbols, or combination thereof, provide general information about the hazards of the chemicals. Abbreviations on sample containers are accepted as long as a reference is readily accessible with the full chemical name for each abbreviation.

- Supervisors will be immediately notified when unlabeled chemical containers are discovered. Unlabeled containers that may contain chemicals should be assumed to be hazardous. An attempt should be made to determine the contents of the container and a correct label should be affixed to the container. If a determination cannot be made about the contents, the chemical lifecycle management program manager should be contacted.

- All piping containing chemicals must be labeled. All new installations of hazardous material pipes and tubes will be labeled in accordance with ASME A13.1 requirements.

2.3.1 Exemptions

Portable secondary containers for immediate use during a single shift, by a single worker who performs the transfer himself/herself, are exempt from the labeling requirements above.
2.3.2 Tanks, Stationary Containers, and Permit-required Work Areas

Chemical storage asset custodians will ensure tanks and other stationary containers are labeled in accordance with requirements in Chemical Lifecycle Management: Chemical Storage Asset Requirements. Labels must include the following elements:

- Name and concentration of the materials contained within the tank or stationary container
- NFPA 704 hazard diamond indicating the health, flammability, reactivity, and any special hazards of the material

Entrances to areas using or storing hazardous materials in quantities requiring a permit or designated by the SLAC fire marshal must be labeled with hazard identification signs as specified in NFPA 704.

2.4 Proposition 65 Warnings

Businesses are required to provide exposure warnings about Proposition 65 listed chemicals that cause cancer, birth defects or other reproductive harm. SLAC provides exposure warning signs near campus entrances. Proposition 65 warning labels are typically found on chemical containers and product safety data sheets. An inventory of Proposition 65 chemicals found at SLAC can be obtained by contacting the chemical coordinator.

2.5 Training

For training requirements, see Chapter 53, “Chemical Safety”.

3 Forms

The following forms and systems are required by these requirements:

- Chemical Management System. System used for ordering chemicals, tracking inventory, and storing safety data sheets

4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- A current safety data sheet (SDS) for each chemical used or stored will be available to all personnel through the Chemical Management System. Supervisors will ensure all workers in areas where chemicals are used or stored have ready access.
- A hazard communication inventory listing all the chemicals present in the workplace will be maintained through the Chemical Management System. Individual work areas should maintain local inventories of hazardous chemicals.
5 References

SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001)
- Chapter 53, “Chemical Safety”
- Chapter 40, “Chemical Lifecycle Management”
  - Chemical Lifecycle Management: Management and Use Requirements (SLAC-I-730-0A09S-038)
  - Chemical Lifecycle Management: Chemical Storage Asset Requirements (SLAC-I-730-0A09S-018)
- Chapter 58, “Laboratory Safety”

Other SLAC Documents
- Chemical Management Services

Other Documents
- American Society of Mechanical Engineers (ASME) A13.1, “Scheme for the Identification of Piping Systems” (ASME A13.1)
- Unidocs. Marking Requirements and Guidelines for Hazardous Materials and Hazardous Wastes (UN-016)
- California Department of Industrial Relations, Cal/OSHA Consultation Service, Education Unit. Guide to California Hazard Communication Regulation
- California Office of Health Hazard Assessment. Proposition 65 Warnings
- California Office of Health Hazard Assessment. Proposition 65 Warnings. Sample Warnings and Translations for Businesses
- Stanford University, Department of Environmental Health and Safety. Proposition 65