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OSHA Hazard Communication Standard

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The Hazard Communication Standard written by the Occupational Safety and Health Administration (OSHA), also known as “Employee Right-to-Know,” is designed to inform and train employees in the proper recognition, use, and handling of hazardous chemicals or products. This includes many products found on most farms and agribusinesses, such as diesel fuel, lubricants, and pesticides. Industry, including agricultural operations with hired employees who are not immediate family members, has been obligated to comply with the Standard since 1988. In order to comply, a company must prepare a written hazard communication plan, maintain an up-to-date inventory of hazardous chemicals or products at the workplace, and label containers of hazardous chemicals or products. In addition, Material Safety Data Sheets (MSDS) must be readily available to employees, and training must be provided to employees working with hazardous chemicals or products.

Material Safety Data Sheets

The Material Safety Data Sheet (MSDS) is a source of detailed information on a chemical or product and provides information on the hazards associated with the chemical or product. OSHA requires that copies of the MSDSs for hazardous chemicals or products be readily accessible to employees at each work site and during each work shift. Federal law requires manufacturers and distributors of products containing hazardous substances to furnish customers with MSDSs for each such substance or product. The manufacturer is responsible

for developing an MSDS for any product containing a hazardous chemical.

Although OSHA specifies that hazard and protective measures information be included on an MSDS, it does not prescribe the exact form. The eight sections that follow explain MSDSs, which play a vital role in a Hazard Communication Program.

Section I. Chemical Identity: identifies the product by both its chemical and common names.

The names must be the same names as are on the label of the product they represent since some chemicals or products have several different names. This section may also identify the manufacturer of the chemical or product. Other information that may appear includes a description of the substance and the CAS (Chemical Abstract System) number of the chemical.

Section II. Hazardous Ingredients: identifies the hazardous ingredients of a product or the hazards associated with the overall product.

The MSDS will list both the chemical and common names of those chemicals known to be hazardous and that represent more than one percent of the product. Chemicals that are known to be carcinogenic and represent greater than one tenth of one percent of the overall product will appear on the MSDS. Chemicals considered a health hazard in exposure levels below those outlined by OSHA’s Permissible Exposure Limit (PEL) or the American Conference of Governmental Industrial Hygienists’ (ACGIH) Threshold Limit Value (TLV) will also appear.

Threshold limit value (TLV), developed by the ACGIH, refers to the concentration of an air contaminant in the working environment to which nearly all workers may be exposed repeatedly, day after day without adverse effect.

Permissible Exposure Level is the cumulative amount of air contaminate a worker may be exposed to for an eight-hour period. For details, and for formulas to determine when the exposure level is reached, refer to OSHA regulations in subpart Z of CFR 29 Part 1910.1000 (d)(1).

Section III. Physical and Chemical Characteristics: lists physical and chemical characteristics of hazardous chemicals or products.

The list includes such items as vapor pressure, boiling or freezing points, density, solubility, and specific gravity. This section also includes a description of the chemical or product appearance and odor, and is helpful when developing policies and procedures for safe work practices.

Section IV. Fire and Explosion Data: describes the chemical or product's potential for fire and explosion.

This section also describes the conditions under which the product, or its chemical constituents, may constitute a fire hazard. It will also include recommended fire-fighting procedures for the product.

Section V. Reactivity Data: describes how the chemical will react with other products or chemicals it may come in contact with.

Also covered here are the hazards associated with the decomposition of the chemical or product by natural or other means. For instance, it will identify potentially toxic gases produced as a result of fire.

Section VI. Health Hazards: lists health hazards associated with the chemical or product, both acute and chronic, and symptoms of overexposure.

Some terms defined by OSHA for this section are toxins, irritants, sensitizers, mutagens, carcinogens, and corrosives. This section identifies the routes of entry of the chemical or product into the body, the recommended exposure limit established by OSHA or the manufacturer, and the possible carcinogenicity of the chemical or product.

Section VII. Precautions for Safe Handling and Use: recommends industrial hygiene practices and clean-up procedures in case of a spill.

Information on EPA waste disposal procedures and Department of Transportation requirements is also included here.

Section VIII. Control Measures: lists generally applicable control measures.

As required by the Hazard Communication Standard, this section of the MSDS lists control measures, including engineering controls, personal protective equipment, administrative controls, or a combination of all three. It should also include specific information on the type of personal protective equipment required when using the product.

These eight requirements for MSDSs are the minimum required by OSHA. Additional information may be added to ensure safe use of the hazardous chemical or product. OSHA does allow some flexibility with regard to the format and the presentation of information of the MSDS within the eight sections.

Written Hazardous Communication Plan

Employers must develop, implement, and maintain at the workplace a written, comprehensive Hazard Communication Plan that includes provisions for container labeling, employee access to Material Safety Data Sheets, and an employee training program. The plan must also contain an inventory of the hazardous chemicals or products in each work area and detail how the employer will inform employees of the hazards associated with these substances. The employer, upon written request, must provide the written plan to employees, their designated representatives, and OSHA representatives.

When outside contractors work at a facility, the resident company must ensure their safety from hazardous chemicals or products and include the following in the written Hazard Communication Plan:

- How the facility will provide the outside contractor with copies of appropriate MSDS.
- How the company will inform the contractor of any precautionary measures they should take to protect employees during normal operations and during foreseeable emergencies.

- How the company will inform the contractor of the labeling system in use. The contract should specify the contractor's responsibility for training his/her employees with regard to the hazards associated with chemicals or products to which there may be exposure.

Employee Training

Employers must provide employee training as part of their Hazard Communication Program. Training is required at the time of a new assignment and whenever a new hazard is introduced into the work area. At a minimum, discussion topics for employee training must include an explanation of the Hazard Communication Standard, the components of the company's program, discussion of operations in hazardous work areas where exposure to chemicals or products may occur, the location(s) of the written Hazard Communication Plan, contact persons, emergency procedures, the inventory list of hazardous chemicals and products, and the location of the MSDSs within the facility. Training is a vital part of the Hazard Communication Standard. The employer must maintain records of those trained and should design the training with consideration for the audience. Guidelines for training employees include:

1. Determine which chemicals or products to include in the hazard communication training.
2. Identify goals and objectives for the training.
3. Design the training method.
4. Conduct the training.
5. Evaluate the training through tests or discussions with employees.
6. Revise the training as necessary.

The goal should be to train employees to understand the hazards they may encounter. Simply informing the employees of the hazards may not be sufficient. Employees need an opportunity to ask questions and to become familiar with the hazards associated with each chemical or product at the job site. Ensuring that employees are able to read and understand both labels and MSDSs is important to the Hazard Communication Program. For functionally illiterate employees, all of the necessary information must be conveyed verbally. Additional information will include emergency

precautions necessary to avoid exposure in the case of accidental release of the chemical or product.

Inventory

One component of the written Hazard Communication Plan is the inventory of hazardous chemicals and products. The inventory indicates that the company has investigated hazardous chemicals or products stored on the site and updated the inventory as necessary, adding new chemicals or products and deleting ones no longer stored on-site.

The Inventory may begin by examining purchasing records for the past year (and MSDSs) to determine which products may contain hazardous chemicals. After identification of the hazardous substance, examine the warehouses, storage areas, machine shops, parts departments, and general work areas for any additional hazardous chemicals or products. If a suspected product containing one or more hazardous chemicals has no label information, the manufacturer can supply an MSDS for the product. The law requires the manufacturer to furnish a copy of the MSDS.

The written Hazard Communication Plan must include the hazardous chemical or product inventory. It is the basis for completing the rest of the requirements of OSHA's Hazard Communication Standard. The Hazard Communication Program must also include commonly used and stored products. Typical examples include: gasoline, diesel fuel, motor oil, lubricants, hydraulic fluid, pesticides, wood preservatives, wood finishes, solvents, some hand cleaners, and parts cleaners. It is the responsibility of the employer, by examining the MSDS, to determine which products are hazardous and must be included in the program.

Labels and Other Forms of Warning

Each container of a hazardous chemical or product must be labeled, tagged, or marked with the identity of the hazardous chemical and must show hazard warnings appropriate for employee protection. The hazard warning may be any type of message, words, pictures, or symbols that convey the hazards of the chemical or product in the container. Labels must be legible, printed in English (plus other languages, if desired), and prominently displayed.

Pesticides labeled in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

and regulations issued by the Environmental Protection Agency (EPA) comply with OSHA's Hazard Communication Standard. The same is true for products labeled in agreement with regulations of the Food and Drug Administration and for consumer products labeled in accordance with regulations of the Consumer Product Safety Act.

OSHA allows some exemptions to its in-plant individual container labeling requirement. For a group of stationary containers within a work area that have similar contents and hazards, employers may post signs that convey the hazard information rather than label individual containers. There is no requirement for employers to label portable containers of hazardous chemicals or products transferred from their original containers if used immediately by the employee who made the transfer. Pictorial labels for employees who cannot read the standard label will convey the hazards of exposure to the product. If a number system is used, provide cards identifying the hazard associated with the number on the label to all employees. Finally, all labels must be legible at all times. Replace destroyed or difficult-to-read labels immediately.

Hazardous Communication Checklist

The checklist below will help maintain compliance with the Hazard Communication Standard.

- List all of the hazardous chemicals or products in the workplace.
- Establish a file for information on hazardous chemicals or products.
- Obtain an MSDS for each hazardous chemical or product in use or stored on site.
- Develop a system to ensure the labeling of all incoming hazardous chemicals or products.
- Review each MSDS for completeness.
- Ensure that MSDSs are readily available.
- Write a Hazard Communication Plan.
- Develop a method for communicating hazards to employees and to others.
- Inform employees of protective measures for hazardous chemicals or products used in the workplace.
- Alert employees to other appropriate forms of warning.

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