HAZARD COMMUNICATION PROGRAM

Knott Brake Company
29 CFR 1910.1200

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I. General Statement of Program

In order to comply with 29 CFR 1910.1200 the following written Hazard Communication Program (HCP) is to be implemented for personnel of:

Knott Brake Company

The major objective of this program is to ensure that employees are protected from physical and health hazards of chemicals in the workplace.

The HCP originals will be kept on file by the Plant Manager in the compliance office. This program will be used by all employees at KBC. The Plant Manager will be responsible for ensuring that the program is current and enforced.

A copy of this program will be available to any employee upon request and will be discussed with any new employee upon hiring. The Plant Manager will be contacted when a copy of the program is needed.

The program will be updated with the addition of new chemicals or hazards in the working environment. The Plant Manager will review this program annually for accuracy and effectiveness.

II. Purchases

KBC Buyers will verify that all chemical purchase orders contain a request (PR) for a Material Safety Data Sheet (MSDS) and the proper labeling before the order is processed.

III. Container Labeling

KBC Shipping and Receiving personnel will be responsible for monitoring all containers of hazardous chemicals that enter the workplace. They will ensure that containers are properly labeled with the following information:

1. Chemical Name
2. Hazardous Warning
3. Name and address of manufacturer, importer, or responsible party

KBC Shipping and Receiving personnel will be trained so that the above is correctly handled. No chemical will be used until Shipping and Receiving personnel have checked it. No chemical will be received without proper labels.

Knott Brake Company does not market chemicals or hazardous materials. The only outgoing chemical containers are waste products. It is the responsibility of the originating department to make sure that these containers are properly labeled. Labels must be available at all times and will be provided by KBC buyers.

If chemicals are to be transferred to a separate container, the Plant Manager or delegated employee will ensure that the new container is properly labeled, and that all secondary containers are labeled. Secondary labels can be an extra copy of the manufacturer's label or a generic label. All secondary labels must list chemical name and if applicable, its hazardous warning and name of manufacturer. Any labeling questions should be brought to the attention of the Plant Manager.

IV. MATERIAL SAFETY DATA SHEETS (MSDS)

The Plant Manager will be responsible for maintaining the MSDS system for the company. New MSD Sheets will be reviewed for significant health and/or safety information. The Plant Manager will ensure that new and necessary information is given to all affected employees. Copies of the MSD Sheets will be kept, updated, and reviewed for accuracy and completeness by the Plant Manager when necessary.

A. The MSDS system includes:
   1. A current "Chemical Inventory List" of all MSD Sheets and a MSDS index list. The index list and chemical inventory list will be indexed to the appropriate MSDS. The index list will serve as a directory in the MSDS book.
   2. The chemical name or identity used on the MSDS will be the same as on the container label.

B. The information on a MSDS generally includes:
   1. The chemical and common name of all ingredients determined to present a hazard.
   2. The physical and chemical characteristics of the chemical, including vapor pressure, etc.
   3. The fire, explosion and reactivity hazards(s) of the chemical, including boiling point, flash point and auto-ignition temperature.
   4. Health hazards of the chemical mixture, including signs and symptoms of exposure; medical conditions recognized as aggravated by exposure; primary route(s) of entry.
   5. Permissible exposure limit (PEL) or any other exposure limit used or recommended by the manufacturer, importer or employer.
   6. Whether the chemical is listed as a carcinogen by the National Toxicology Program (NTP) or has been found to be a potential carcinogen by the American Conference of Governmental Industrial Hygienists (ACGIH) or OSHA.
   7. The control measures for the chemical, including fire, engineering and personal protective equipment.
   8. General precautions for safe handling and use, including protective measures during repair and maintenance of equipment involving the chemical.
   9. Procedures for cleanup of spill and leaks.
   10. Emergency first aid procedures.
   11. Date the MSDS was prepared or revised.
   12. Name, address and telephone numbers of manufacturer, importer, or responsible party to call in an emergency.

The MSDS originals will be filed and properly indexed in the master book by the Plant Manager. A copy will be put in the Employee Book of MSD Sheets. The Employee Book will be located in the employee lunchroom. This book is for all employees who wish to have information on a chemical they use. The Plant Manager will keep this book up-to-date and current. A new chemical will not be used until its MSDS is in the Employee Book.

V. EMPLOYEE INFORMATION AND TRAINING

Before starting work, a new employee will review a copy of the Hazard Communication Program (HCP) and the MSD Sheets applicable to that position.

Before an employee uses a new chemical, they will be instructed on safe use and trained on the hazards of the chemical by their immediate supervisor.

Employees will review the HCP and MSDS system annually. The minimum orientation and training for a new employee is as follows:

1. An overview of the requirements contained in the Hazard Communication Program.
2. Location and availability of the written HCP.
3. An overview of the MSDS system.
4. Location of chemical inventory list.
5. The MSD Sheets of chemicals which pertain to that employee's position.
6. How to lessen or prevent exposure to hazardous chemicals through personal protective equipment and work practices.
7. Steps taken by Knott Brake Company to lessen or prevent exposure to the chemicals listed on the inventory list.
8. Emergency procedures to follow.

Employees will sign a form verifying:

- they have been trained
- the HCP is available for review
- they understand the HCP

Handout materials and/or examples of MSDSs and labels may be used as a training guide. Demonstrations with personal protective equipment may also be used in training.

VI. NON-ROUTINE TASKS

Before any non-routine task is performed, the employee will be advised of special precautions to follow. If the employee receives no instruction, the employee should contact their immediate supervisor. In addition, the Plant Manager will inform any other personnel who could be exposed of this potential exposure.

In the event such tasks are required, the Plant Manager, or leading supervisor, will provide the following information about such activity as it relates to the specific chemicals expected to be encountered.

1. Specific chemical names(s) and applicable hazards.
2. What personal protective equipment is required.
3. What safety measures are to be taken and emergency procedures to follow.
4. Measure that have been taken to lessen a hazard (i.e. the presence of other employees, ventilation)

VII. EVALUATING THE TRAINING PROGRAM

A. Effectiveness
    1. Program revisions.
    2. Parts of the program which are known and/or unnecessary.
B. Clarity
    1. Missing information in the program.
    2. Parts of program which are not clearly stated or not easily comprehended.
C. Frequency
    1. Information that is learned or not sufficiently learned.
    2. Information retained by employees.
D. Training Regulations
    1. Employees must be taught how to read and understand an MSDS.
    2. The HCP will provide information on what to look for on an MSDS.

VIII. HEALTH AND ENVIRONMENTAL HAZARDS DEFINITIONS

Industrial Hygiene is the portion of the safety and health field, devoted to preventing employee illness and disease.

- **Industrial Hygiene**: science devoted to the *Anticipation, Recognition, Evaluation* and *Control* of occupational environmental factors or stresses arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort among workers or among the citizens of the community

Classes of Environmental Stresses

- **Chemical**: excessive airborne concentrations of dust, mist, gas, vapor and fume
- **Physical**: noise, heat, ionizing and non-ionizing radiation
- **Ergonomic**: man-machine interface, human factors engineering, anthropometrics
- **Biological**: microscopic living organisms (bacteria, virus, etc.)

General

- **Ceiling**: level not to be exceeded at any time during the workday (i.e. 50ppm CO2)
- (STEL) Short Term Exposure Limit: a 15 minute time-weighted average (TWA) exposure which will not produce: irritation, chronic or irreversible tissue damage, narcosis

Routes of Entry

- **Inhalation**: airborne contaminants inhaled directly into the lungs—Inhalation is the major route of entry for hazardous chemicals in the work environment (dusts, mists, fumes, aerosols).
- **Ingestion**: by mouth when individuals unknowingly eat or drink harmful chemicals (asbestos, lead)
- **Absorption**: absorbed into the body via cut or abrasion, hair follicles, dissolving fats and oils of the skin (toluene, organic lead compounds, organic phosphate pesticides, cyanides, phenols)
- **Injection**: sharp objects (syringes)

Effects of Exposure

- Concentration of Substance
- Probability of Material Producing Injury
- Rate of Generation of Material
- Control Measures

Toxicity This is the capacity of a material to produce injury or harm to an individual. It depends upon the dose, rate, method, site of absorption and temperature as well as the individual's general health and diet.

- **Irritants**: inflame surfaces of the body (asbestos, silica, iron, oxide, chlorine)
- **Systemic Poisons**: affect an organ or body system (lead, carbon, disulfide)
- **Depressants**: affect CNS (ethyl alcohol, acetylene, benzene)
- **Asphyxiates**: prevent oxygen from reaching body cells (nitrogen, carbon monoxide, methane, helium)
- **Carcinogens**: cancer causing (benzene, asbestos, vinyl chloride)
- **Teratogens**: affect the fetus (lead, ethanol)
- **Mutagens**: affect the species (ionizing radiation)