Chapter 13
Tim Foster - dba MPC (Maintenance Projects & Construction)

Company Policy for Hazard Communication

Tim Foster - dba MPC (Maintenance Projects & Construction) has adopted this policy for Hazard Communication from OSHA regulation:

§1910.1200 - Hazard Communication

Tim Foster - dba MPC (Maintenance Projects & Construction) has implemented this program to ensure that employees are informed of any chemical hazards and hazardous or toxic substances in their workplace:

Tim Foster is the administrator of the Company Hazard Communication Program, and will document all necessary training of employees. Tim Foster - dba MPC (Maintenance Projects & Construction) will provide employees and new hires at their initial assignment effective information and training on hazardous chemicals in their work area that will include:

- Requirements of this program.
- Any operations in their work area where hazardous chemicals are present.
- Location of written hazard communication program, listing of hazardous chemicals present & MSDS.
- Methods and/or observations that may be used to detect the presence or release of hazardous chemicals by use of monitoring devices, visual appearance, or odor.
- The physical & health hazards of chemicals in the work area.
- Protection measures to be utilized to prevent exposure, appropriate work practices, emergency procedures, and proper PPE to be used.
- Details of the hazard communication program, explanation of the labeling system and the MSDS and how employees can obtain & use the appropriate hazard information.

Tim Foster - dba MPC (Maintenance Projects & Construction) will develop, implement, and maintain at each workplace a written hazard communication program that describes how labels and other forms of warning, material safety data sheets, and employee information will be accomplished.

Employees will be notified of any hazardous substances used by any company other than Tim Foster - dba MPC (Maintenance Projects & Construction) in the workplace, and make MSDS available to employees.

All containers used on the job will be labeled for content, and precautions if substance contained is hazardous. Materials will be left in their manufacturer's container, returned to the container immediately after use, or any unused portion disposed of properly. If labels become illegible for any reason, a new label will be affixed containing all required precautionary information, or the material disposed of properly. See examples of precautionary labeling on pages 9 and 18 of this section.
A list of all chemicals known to be used at the workplace by Company employees will be available for review at the jobsite and in the office. MSDS for all chemicals used in the workplace by Tim Foster - dba MPC (Maintenance Projects & Construction) are available to employees at the worksite from the job foreman or in the office. Following is a list of all known hazardous chemicals used by Tim Foster - dba MPC (Maintenance Projects & Construction) personnel in the workplace:

<table>
<thead>
<tr>
<th>Brand Name:</th>
<th>Hazardous Ingredient:</th>
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Tim Foster will ensure that each container of hazardous chemicals in the workplace is labeled, tagged, or marked with the following information:

- Identity of the hazardous chemical(s) contained therein.
- Appropriate hazard warnings, or alternatively, words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under this Hazard Communication Program. Employees will be provided with the specific information regarding the physical and health hazards of the hazardous chemical.
- Name and address of the chemical manufacturer, importer, or other responsible party.

Tim Foster will ensure that labels or other forms of warning in English, are legible, and prominently displayed on the container, or readily available in the work area throughout each work shift.

When Tim Foster - dba MPC (Maintenance Projects & Construction) has employees who are non-English speaking, information shall be presented in their language as well.

Changes of job assignments, changes in materials used, or any non-routine tasks involving hazardous substances or conditions will require notification and/or retraining of effected employees. Tim Foster will inform or retrain employees of any new or additional hazards, detail methods of hazard abatement or elimination, and provide proper personal protective equipment or engineering controls necessary for the job. Notifications and retraining will be documented as to name of employee, date, description of action taken, and verification by Tim Foster.

A copy of the Company’s Hazard Communication Program is available to all employees, and will be kept at each jobsite by the foreman in charge, or in the office. Translations of the hazard communication program are available to non-English speaking employees upon request from Tim Foster.

Company Hazard Communication Plan & Program Follows This Page
Company Hazard Communication Plan & Program

General Policy Statement
The management of Tim Foster - dba MPC (Maintenance Projects & Construction) is committed to preventing accidents and ensuring the safety and health of our employees. We will comply with all applicable federal and state health and safety rules and provide a safe, healthful environment for all our employees. This written hazard-communication plan is available at the following location for review by all employees:

Tim Foster - dba MPC (Maintenance Projects & Construction) Company Office
1198 Newport Trail
Evans, Georgia 30809

Container Labeling
- All hazardous chemical containers used at this workplace will clearly identify the chemical on the label, and include an appropriate hazard warning and the manufacturer's name and address.
- All containers used on the job must be labeled for content and precautions if substance contained is hazardous. Materials will be left in their manufacturer's container where possible. When hazardous materials are transferred to other containers for ease of use, the container will be clearly marked for content, and any remaining material returned to its original manufacturer's container immediately after use.
- If labels become illegible for any reason, a new label must be affixed containing all required information, or the material disposed of properly.
- No container will be released for use until this information is verified. Tim Foster will ensure that all containers are labeled with a copy of the original manufacturer's label or a label that has the appropriate identification and hazard warning.

Material Safety Data Sheets
Material safety data sheets are readily available to all employees of Tim Foster - dba MPC (Maintenance Projects & Construction). Employees can review material safety data sheets for all hazardous chemicals used at this workplace. MSDS are kept with the hazard communication plan at the office location listed above. The material safety data sheets are updated and managed by Tim Foster. If a material safety data sheet is not available for a hazardous chemical, before use, notify Tim Foster, and a MSDS will be obtained for the chemical to be used.

Employee Training
Before they start their jobs, new employees will receive hazard communication training that covers the following topics:
- An overview of the requirements in OSHA's CFR 29 1910.1200 hazard communication rules.
- Hazardous chemicals present in their workplace.
- The written hazard-communication plan, and where it may be reviewed.
- Physical and health effects of the hazardous chemicals.
• Methods used to determine the presence or release of hazardous chemicals in the work area.
• How to reduce or prevent exposure to these hazardous chemicals through use of control/work practices and personal protective equipment.
• Steps we have taken to reduce or prevent exposure to these chemicals.
• Emergency procedures to follow if an employee is exposed to these chemicals.
• How to read labels and review material safety data sheets.

After attending the training, each employee will sign a company training form verifying that they understand the above topics and how the topics are related to our hazard-communication plan.

**Hazardous Chemicals List**

The following list identifies all hazardous chemicals used at this workplace. Detailed information about the physical and health effects of each chemical is included in a material safety data sheet; the identity of each chemical on the list matches the identity of the chemical on its material safety data sheet. Material safety data sheets are readily available to employees in their work areas.

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<tr>
<th>Product or Brand Name</th>
<th>Manufacturer</th>
<th>Hazardous Ingredient</th>
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**Hazardous Non-Routine Tasks**

Before employees perform non-routine tasks that may expose them to hazardous chemicals, they will be informed by their supervisors about the chemicals' hazards. Their supervisors also will inform them about the safe work practices necessary to control exposure and what to do in an emergency. Examples of non-routine tasks that may expose employees to hazardous chemicals include the following:

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<th>Task</th>
<th>Hazard</th>
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**Hazardous Chemicals in Pipes, Closed, or Hidden Systems**

Before working in areas where hazardous chemicals are transferred through pipes or where pipes are insulated with asbestos-containing material, employees will contact

- The chemicals in the pipes.
- The physical or health effects of the chemicals or the asbestos insulation.
- The safe work practices to prevent exposure.

**Notification of Contractors**

It is the responsibility of the assigned job foreman to provide any workplace associated contractors and their employees with the following information if they may be exposed to hazardous chemicals in our workplace:

- The identity of the chemicals, how to review material safety data sheets, and an explanation of the container and pipe labeling system.
- Safe work practices to prevent exposure.

This person will also obtain a material safety data sheet for any hazardous chemical a contractor brings into the workplace to which an employee of *Tim Foster - dba MPC (Maintenance Projects & Construction)* may be exposed.

**Hazard Communication in the Workplace**

The essence of hazard communication is a warning. We use thousands of chemical products throughout our lives, at home and at work. However, most of us would be hard-pressed to distinguish safe products from hazardous ones without a warning - the familiar skull-and-crossbones, for example. The warning tells us the product is hazardous, that it can harm us if we use it improperly.
In the workplace, hazard communication ensures that workers who may be exposed to hazardous chemicals know about the chemicals’ hazards and understand how to protect themselves from exposure.

**The Hazard Communication Process**

Hazard communication begins when chemical manufacturers and importers evaluate their products to determine each product’s chemical hazards. Next, they prepare a Material Safety Data Sheet – known by the abbreviation MSDS – for each product. An MSDS includes detailed information about the product’s hazards. Manufacturers and importers must include an MSDS and a warning label with each container of product that they ship to a customer.

The part of the process that affects your workplace is the “Written Hazard-Communication Plan.” The plan identifies hazardous chemicals at your workplace and describes how you will use material safety data sheets, warning labels, and training to protect employees and keep informed about the product’s chemical hazards.

**Definition of a Hazardous Chemical**

OSHA’s hazard-communication rule, 1910.1200, defines a hazardous chemical as “any element, chemical compound, or mixture that is a physical hazard or a health hazard.”

**Chemicals that are physical hazards**

Chemicals that are physical hazards are unstable and, when handled improperly, can cause fires or explosions. A chemical that is a physical hazard has one of the following characteristics:

- Is a combustible liquid.
- Is a compressed gas.
- Is explosive.
- Is flammable.
- Is water-reactive.
- It starts or promotes combustion in other materials.
- It can ignite spontaneously in air.

**Chemicals that are health hazards**

Chemicals that are health hazards can damage an exposed person’s tissue, vital organs, or internal systems. Generally, the higher the chemical’s toxicity the lower the amount or dose necessary for it to have harmful effects. The effects vary from person to person, ranging from temporary discomfort to permanent damage, depending on the dose, the toxicity, and the duration of exposure to the chemical.

Health effects range from short-duration symptoms that often appear immediately (acute effects) to persistent symptoms that usually appear after longer exposures (chronic effects). Health effects can be classified by how they affect tissue, vital organs, or internal systems:

- Agents that damage the lungs, skin, eyes, or mucous membranes
- Carcinogens cause cancer
- Corrosives damage living tissue
- Hematopoietic agents affect the blood system
- Hepatotoxins cause liver damage
- Sensitizers cause allergic reactions & Irritants cause inflammation of living tissue
- Nephrotoxins damage cells or tissues of the kidneys
- Neurotoxins damage tissues of the nervous system
- Reproductive toxins damage reproductive systems, endocrine systems, or a developing fetus
How to determine if a chemical is hazardous

A chemical is hazardous if it is listed in one of the following documents:

- OSHA Division 2, Subdivision Z safety and health rules, Toxic and Hazardous Substances; Division 3, Subdivision Z, Toxic and Hazardous Substances (Construction); Division 4, Subdivision Z, Chemical/Toxins (Agriculture)
- Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment (latest edition). Published by the American Conference of Industrial Hygienists (ACGIH)
- The Registry of Toxic Effects of Chemical Substances, published by the National Institute for Occupational Safety and Health (NIOSH)
- The container label of the product will issue a warning of hazardous effects.

Commonly used hazardous chemicals

Listed below are chemicals among those most commonly used in U.S. workplaces.

<table>
<thead>
<tr>
<th>Hazardous Chemical</th>
<th>Harmful Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1,1-Trichloroethane</td>
<td>May cause mutations in cells; can irritate the skin and eyes and cause unconsciousness and death. High exposures may damage the liver and kidneys.</td>
</tr>
<tr>
<td>Acetone</td>
<td>Can irritate the skin, eyes, nose, and throat. High concentrations can cause dizziness and loss of consciousness.</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Can irritate the eyes, nose, and throat. Repeated high exposure can cause scarring of the lungs and shortness of breath.</td>
</tr>
<tr>
<td>Ammonia</td>
<td>Can irritate the lungs and burn the eyes and skin. Long-term exposure can cause irritation of the eyes, nose, mouth, and throat.</td>
</tr>
<tr>
<td>Benzene</td>
<td>A cancer-causing agent that has been shown to cause leukemia. May also cause headaches and irritation of the eyes, nose, and throat. High exposure can cause convulsions and death.</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>Can irritate the eyes, nose, and throat. Repeated contact can cause drying and scaling of skin and may cause liver damage. High concentrations may cause dizziness and loss of consciousness.</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>Can irritate the eyes, nose, or throat and cause nausea, vomiting, and headaches. Repeated or high exposure levels can cause kidney damage or stones and brain damage. May cause birth defects.</td>
</tr>
<tr>
<td>Freon 113</td>
<td>May cause skin irritation and rashes as well as drowsiness.</td>
</tr>
<tr>
<td>Glycol ethers</td>
<td>Can irritate the eyes, nose, and throat and may cause birth defects. Repeated or high exposure can cause kidney damage or stones. Brain damage also may occur.</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>Can irritate the lungs. High exposure can cause buildup of fluid in the lungs, which can cause death.</td>
</tr>
<tr>
<td>Lead</td>
<td>Can cause weakness and insomnia. Higher exposure can result in damage to the nervous and reproductive systems.</td>
</tr>
<tr>
<td>Methanol</td>
<td>Irritates the eyes, nose, mouth, and throat and can cause liver damage.</td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>Can cause dizziness, headaches, blurred vision, and loss of consciousness. May cause birth defects.</td>
</tr>
<tr>
<td>Methyl isobutyl ketone</td>
<td>Irritates the skin, eyes, nose, and throat, and may cause dizziness, nausea, diarrhea, and loss of consciousness. Long-term exposure may damage the liver and kidneys.</td>
</tr>
<tr>
<td>Phenol</td>
<td>Can irritate the mouth, nose, throat, and eyes. Long-term exposure may damage the liver and kidneys and lead to genetic damage. May be a cancer risk. Major skin contact or inhaling it can cause death.</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>Breathing the dust or droplets can irritate and burn the lungs. Contact can cause severe skin burns.</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>Can severely burn the skin and eyes. Repeated long-term exposure can cause bronchitis, shortness of breath, and emphysema.</td>
</tr>
<tr>
<td>Tetrachloroethylene</td>
<td>A suspected human carcinogen that has caused liver cancer in animals. It may damage the liver and kidneys after low but repeated exposure. It can cause dizziness and loss of consciousness.</td>
</tr>
<tr>
<td>Xylene</td>
<td>Can irritate the eyes, nose, and throat; high levels can cause loss of consciousness and death. It may damage fetuses. Repeated exposure may damage bone marrow and eyes and cause stomach problems.</td>
</tr>
</tbody>
</table>
Using Material Safety Data Sheets

A material safety data sheet contains detailed information about a hazardous chemical product's health effects, physical and chemical characteristics, and safe practices for using it.

Responsibilities of chemical manufacturers, importers, and distributors

Chemical manufacturers and importers must prepare a material safety data sheet for each hazardous chemical product they produce. Distributors are responsible for ensuring that you have a material safety data sheet for each hazardous chemical product they sell to you.

What to do if you use hazardous chemical products at your workplace

You must have a current material safety data sheet for each product. Employees must be able to review material safety data sheets in their work area at any time. You can keep material safety data sheets in a notebook or on a computer; however, employees must be able to obtain the information immediately in an emergency. One person should be responsible for managing all the material safety data sheets at your workplace. The person should ensure that the list of hazardous chemicals is current, that the identity of each chemical on the list matches its identity on its material safety data sheet, and that incoming hazardous-chemical containers have material safety data sheets.

What to do when you no longer use a hazardous chemical at your workplace

When you no longer use a hazardous chemical, you do not need to keep its material safety data sheet. However, you do need to keep a record of the chemical’s identity, the locations, and the calendar years it was used in your workplace, for at least 30 years. For more information about record-keeping requirements, see 1910.1020(d)(ii)(B), "Access to employee exposure and medical records."

Information required on Material Safety Data Sheets

Chemical manufacturers and importers must prepare a material safety data sheet for each hazardous chemical product they ship to you. The following information must appear on each sheet.

<table>
<thead>
<tr>
<th>Required Information</th>
<th>Description</th>
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<tbody>
<tr>
<td>Identity of the chemical</td>
<td>Typically, a common chemical name. (The identify of the chemical on a material safety data sheet must match its identity on the container label.)</td>
</tr>
<tr>
<td>Physical &amp; chemical characteristics</td>
<td>For example: vapor pressure, flashpoint, and solubility.</td>
</tr>
<tr>
<td>Physical hazards</td>
<td>For example: potential for fire, explosion, or reaction with water or other chemicals.</td>
</tr>
<tr>
<td>Health hazards</td>
<td>For example: signs and symptoms of exposure, and medical conditions that might be aggravated by exposure.</td>
</tr>
<tr>
<td>Primary routes of chemical entry</td>
<td>How the chemical enters the body.</td>
</tr>
<tr>
<td>Permissible Exposure limit (PEL)</td>
<td>The maximum amount of the chemical that one can be exposed to during an eight-hour work shift.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Based on findings in the National Toxicology Program Annual Report on Carcinogens or the International Agency for Research on Cancer Monographs (latest editions).</td>
</tr>
<tr>
<td>Precautions for safe use</td>
<td>How to handle the chemical safely, hygiene and protective practices, and clean-up procedures for spills and leaks.</td>
</tr>
<tr>
<td>Control measures</td>
<td>The engineering controls, safe work practices, and personal protective equipment necessary to control exposure.</td>
</tr>
<tr>
<td>Emergency and first aid procedures</td>
<td>How to respond to spills, leaks, contamination, and overexposure.</td>
</tr>
<tr>
<td>Preparation date</td>
<td>The date the material safety data sheet was prepared or updated.</td>
</tr>
<tr>
<td>Name, address, and phone number</td>
<td>Who to contact for more information on the chemical's hazards and emergency-response procedures.</td>
</tr>
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</table>
**Using container warning labels**

The purpose of a container warning label is to warn employees about the container's contents and to refer employees to an appropriate material safety data sheet for more information about the chemical's physical and health hazards. Manufacturers, importers, and distributors must ensure that each hazardous chemical product sold to you has a label that includes the chemical's identity, a hazard warning, and a name and address for additional information about the product. If you use hazardous chemicals at your workplace, you must ensure that each hazardous chemical container has a legible label, in English, that identifies the chemical and warns of its hazards.

**Containers that must be labeled**

Original containers of hazardous chemicals from a manufacturer, importer, or distributor must have warning labels. Do not remove or deface them. If you transfer a hazardous chemical from a labeled container to an unlabeled container, label the container.

**An exception for portable containers**

You do not need to put a warning label on a portable container if you use it to transfer a hazardous chemical from a labeled container. However, the chemical in the container must be for immediate use. This means "the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred." See 1910.1200 (c), Definitions.

**Content of a warning label**

A warning label must identify the chemical – a common chemical name or a code name is acceptable – and display a hazard warning such as **DANGER** or the familiar skull and crossbones.

- The identity of the chemical on the label, on its material safety data sheet, and on your hazardous chemical list must match.
- If you are not sure that a hazardous chemical container is properly labeled, contact the manufacturer or supplier.
- Make someone at your workplace responsible for ensuring that all hazardous-chemical containers are properly labeled.

**Examples of container labels for acetone**

If you use hazardous chemicals at your workplace, you must ensure that each hazardous chemical container has a legible label, in English, that identifies the chemical and warns of its hazards. This illustration shows acetone warning labels on an original container, an unlabeled (secondary) container, and a portable container.

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*If you transfer a hazardous chemical from a labeled container to an unlabeled container, you must label the container with the identity of the chemical and include an appropriate hazard warning.*
Training Employees

**Required hazard-communication training**

If you have employees who may be exposed to hazardous chemicals, you must inform them about the chemicals and train them when they are hired and whenever they are exposed to a new chemical hazard or a process change. Required employee training:

- Where to find and how to read the hazard-communication plan, the list of hazardous chemicals, and material safety data sheets.
- The operations in which hazardous chemicals are used.
- The physical and health hazards of hazardous chemicals used by employees.
- The meaning of warning labels on hazardous-chemical containers and on pipes that contain hazardous substances.
- How to recognize emergencies involving hazardous chemicals.
- How to use personal protective equipment.

**Who can train employees?**

Choose a person who understands the above topics and has the skills to conduct the training. What is important is that employees are taught which hazardous chemicals they may be exposed to and understand how to use the information on container warning labels and material safety data sheets to protect themselves.

OSHA's hazard-communication rules affect all workplaces that have employees who may be exposed to hazardous chemicals. Following are rules that affect general industry and construction workplaces.

**Hazard Communication  §1910.1200 – General Industry, §1926.59 – Construction**

- Requires chemical manufacturers or importers to assess the hazards of the chemical products they produce or import and to prepare container warning labels and material safety data sheets for hazardous chemical products they ship to customers.
- Requires distributors to ensure that each container of a hazardous chemical product is properly labeled before it is shipped to a customer and to ensure that a material safety data sheet for each product is included in the customer's initial shipment.
- Requires employers to inform their employees about the hazardous chemicals to which they may be exposed through a written hazard communication plan, container warning labels, material safety data sheets, and training.
EMPLOYEE TRAINING RECORD
To be kept in employee's personal records file

Employee Name: 

Employee Job Description: 

<table>
<thead>
<tr>
<th>Training Date</th>
<th>Subject of Training</th>
<th>Description of Training</th>
<th>Trainer's Name</th>
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</table>
I, ________________, have been informed about the hazardous chemicals that I may be exposed to during my work and I have received training on the following topics:

- An overview of the requirements in OSHA's hazard communication rules.
- Hazardous chemicals present in the workplace.
- The written hazard-communication plan.
- Physical and health effects of the hazardous chemicals.
- Methods to determine the presence or release of hazardous chemicals in the work area.
- How to reduce or prevent exposure to these hazardous chemicals through use of exposure controls/work practices and personal protective equipment.
- Steps we have taken to reduce or prevent exposure to these chemicals.
- Emergency procedures to follow if exposed to these chemicals.
- How to read labels and review material safety data sheets.

Note to employee:
This form becomes part of your personnel file; read and understand it before signing. By signing below I attest and verify that I have received training in the above areas of hazard communication, and that I understand the content of that training.

Employee: ___________________________ Date: ____________

Trainer: ___________________________ Date: ____________
§1910.1200 — HAZARD COMMUNICATION

(a) Purpose.

(1) The purpose of this section is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.

(2) This occupational safety and health standard is intended to address comprehensively the issue of evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legal requirements of a state, or political subdivision of a state, pertaining to this subject. Evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is not limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces; preparation and distribution of material safety data sheets to employees and downstream employers; and development and implementation of employee training programs regarding hazards of chemicals and protective measures. Under section 18 of the Act, no state or political subdivision of a state may adopt or enforce, through any court or agency, any requirement relating to the issue addressed by this Federal standard, except pursuant to a Federally-approved state plan.

(b) Scope and application.

(1) This section requires chemical manufacturers or importers to assess the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers.

(Employers who do not produce or import chemicals need only focus on those parts of this rule that deal with establishing a workplace program and communicating information to their workers. Appendix E of this section is a general guide for such employers to help them determine their compliance obligations under the rule.)

(2) This section applies to any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

(c) Definitions. (See Definitions at the end of this section)

(e) Written hazard communication program.

(1) Employers shall develop, implement, and maintain at each workplace, a written hazard communication program which at least describes how the criteria specified in paragraphs (f), (g), and (h) of this section for labels and other forms of warning, material safety data sheets, and employee information and training will be met, and which also includes the following:

(i) A list of the hazardous chemicals known to be present using an identity that is referenced on the appropriate material safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas); and,

(ii) The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals contained in unlabeled pipes in their work areas.

(2) Multi-employer workplaces. Employers who produce, use, or store hazardous chemicals at a workplace in such a way that the employees of other employer(s) may be exposed (for example, employees of a construction contractor working on-site) shall additionally ensure that the hazard communication programs developed and implemented under this paragraph (e) include the following:

(i) The methods the employer will use to provide the other employer(s) on-site access to material safety data sheets for each hazardous chemical the other employer(s)' employees may be exposed to while working;

(ii) The methods the employer will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace's normal operating conditions and in foreseeable emergencies; and,

(iii) The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace.

(3) The employer may rely on an existing hazard communication program to comply with these requirements, provided that it meets the criteria established in this paragraph (e).
(4) The employer shall make the written hazard communication program available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director, in accordance with the requirements of 29 CFR 1910.20(e).

(5) Where employees must travel between workplaces during a workshift, i.e., their work is carried out at more than one geographical location, the written hazard communication program may be kept at the primary workplace facility.

(f) Labels and other forms of warning.

(1) The chemical manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked with the following information:
   (i) Identity of the hazardous chemical(s);
   (ii) Appropriate hazard warnings; and
   (iii) Name and address of the chemical manufacturer, importer, or other responsible party.

(5) Except as provided in paragraphs (f)(6) and (f)(7) of this section, the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with the following information:
   (i) Identity of the hazardous chemical(s) contained therein; and,
   (ii) Appropriate hazard warnings, or alternatively, words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

(8) The employer shall not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

(9) The employer shall ensure that labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. Employers having employees who speak other languages may add the information in their language to the material presented, as long as the information is presented in English as well.

(g) Material safety data sheets.

(1) Chemical manufacturers and importers shall obtain or develop a material safety data sheet for each hazardous chemical they produce or import. Employers shall have a material safety data sheet in the workplace for each hazardous chemical which they use.

(8) The employer shall maintain in the workplace copies of the required material safety data sheets for each hazardous chemical, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). (Electronic access, microfiche, and other alternatives to maintaining paper copies of the material safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options.)

(9) Where employees must travel between workplaces during a workshift, i.e., their work is carried out at more than one geographical location, the material safety data sheets may be kept at the primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.

(10) Material safety data sheets may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous chemicals in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous chemicals. However, the employer shall ensure that in all cases the required information is provided for each hazardous chemical, and is readily accessible during each work shift to employees when they are in their work area(s).

(h) Employee information and training.

(1) Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and material safety data sheets.

(2) Information. Employees shall be informed of:
   (i) The requirements of this section;
   (ii) Any operations in their work area where hazardous chemicals are present; and,
(iii) The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and material safety data sheets required by this section.

(3) Training. Employee training shall include at least:

(i) Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);

(ii) The physical and health hazards of the chemicals in the work area;

(iii) The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and,

(iv) The details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

Definitions

"Article" means a manufactured item other than a fluid or particle:

(i) Which is formed to a specific shape or design during manufacture;

(ii) Which has end use function(s) dependent in whole or in part upon its shape or design during end use;

(iii) Which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

"Assistant Secretary" means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

"Chemical" means any element, chemical compound or mixture of elements and/or compounds.

"Chemical manufacturer" means an employer with a workplace where chemical(s) are produced for use or distribution.

"Chemical name" means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

"Combustible liquid" means any liquid having a flashpoint at or above 100°F (37.8°C), but below 200°F (93.3°C), except any mixture having components with flashpoints of 200°F (93.3°C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

"Commercial account" means an arrangement whereby a retail distributor sells hazardous chemicals to an employer, generally in large quantities over time and/or at costs that are below the regular retail price.

"Common name" means any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

"Compressed gas" means:

(i) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70°F (21.1°C)

(ii) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130°F (54.4°C) regardless of the pressure at 70°F (21.1°C); or

(iii) A liquid having a vapor pressure exceeding 40 psi at 100°F (37.8°C) as determined by ASTM D-323-72.

"Container" means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

"Designated representative" means any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.
"Director" means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

"Distributor" means a business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

"Employee" means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

"Employer" means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

"Explosive" means a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

"Exposure" or "exposed" means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g. accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption).

"Flammable" means a chemical that falls into one of the following categories:
(i) "Aerosol, flammable" means an aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening;
(ii) "Gas, flammable" means:
  (A) A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of thirteen (13) percent by volume or less; or
  (B) A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than twelve (12) percent by volume, regardless of the lower limit;
(iii) "Liquid, flammable" means any liquid having a flashpoint below 100° F (37.8° C), except any mixture having components with flashpoints of 100° F (37.8° C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.
(iv) "Solid, flammable" means a solid, other than a blasting agent or explosive as defined in §1910.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second along its major axis.

"Flashpoint" means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested as follows:
(i) Tagliabue Closed Tester (See American National Standard Method of Test for Flash Point by Tag Closed Tester, Z11.24-1979 (ASTM D 56-79)) for liquids with a viscosity of less than 45 Saybolt Universal Seconds (SUS) at 100° F (37.8° C), that do not contain suspended solids and do not have a tendency to form a surface film under test; or
(ii) Pensky-Martens Closed Tester (See American National Standard Method of Test for Flash Point by Pensky-Martens Closed Tester, Z11.7-1979 (ASTM D 93-79)) for liquids with a viscosity equal to or greater than 45 SUS at 100° F (37.8° C), or that contain suspended solids, or that have a tendency to form a surface film under test; or
(iii) Setaflash Closed Tester (see American National Standard Method of Test for Flash Point by Setaflash Closed Tester (ASTM D 3278-78)). Organic peroxides, which undergo auto-accelerating thermal decomposition, are excluded from any of the flashpoint determination methods specified above.

"Foreseeable emergency" means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

"Hazardous chemical" means any chemical which is a physical hazard or a health hazard.

"Hazard warning" means any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the specific physical and health hazard(s), including target organ effects, of the chemical(s) in the container(s). (See the definitions for "physical hazard" and "health hazard" to determine the hazards which must be covered.)
"Health hazard" means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes. Appendix A provides further definitions and explanations of the scope of health hazards covered by this section, and Appendix B describes the criteria to be used to determine whether or not a chemical is to be considered hazardous for purposes of this standard.

"Identity" means any chemical or common name which is indicated on the material safety data sheet (MSDS) for the chemical. The identity used shall permit cross references to be made among the required list of hazardous chemicals, the label and the MSDS.

"Immediate use" means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

"Importer" means the first business with employees within the Customs Territory of the United States which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employers within the United States.

"Label" means any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

"Material safety data sheet (MSDS)" means written or printed material concerning a hazardous chemical which is prepared in accordance with paragraph (g) of this section.

"Mixture" means any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.

"Organic peroxide" means an organic compound that contains the bivalent -O-O-structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

"Oxidizer" means a chemical other than a blasting agent or explosive as defined in §1910.109(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

"Physical hazard" means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

"Produce" means to manufacture, process, blend, extract, generate, emit, formulate, or repackage.

"Pyrophoric" means a chemical that will ignite spontaneously in air at a temperature of 130° F (54.4° C) or below.

"Responsible party" means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

"Specific chemical identity" means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

"Trade secret" means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix D sets out the criteria to be used in evaluating trade secrets.

"Unstable (reactive)" means a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become selfreactive under conditions of shocks, pressure or temperature.

"Use" means to package, handle, react, emit, extract, generate as a byproduct, or transfer.

"Water-reactive" means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

"Work area" means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

"Workplace" means an establishment, job site, or project, at one geographical location containing one or more work areas.
Hazardous Material Container Labels

All containers used on the job must be labeled for content and precautions if the substance contained is hazardous. Labels must contain the following information:

- Identity of hazardous chemicals
- Appropriate hazard warnings
- Name & address of the chemical manufacturer, importer, or distributor

Labels may use words, pictures, symbols, or a combination of these to indicate that a hazardous substance is contained. Following are examples of hazardous substance label warning information:

- **WARNING:** CONTENTS ARE EXTREMELY CORROSIVE
  INGREDIENTS: Hydrochloric Acid

- **CAUTION:** CONTAINS RADIOACTIVE MATERIALS
  CONTENTS: BARIUM

- **DANGER:** CONTENTS ARE TOXIC
  AND MAY BE HAZARDOUS TO YOUR HEALTH HARMFUL OR FATAL IF SWALLOWED

- **WARNING:** contents are under pressure
  DO NOT puncture can or expose to high heat.

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**ECHOLAB**

**Great Reflection**

Ultra High Wear Floor Finish

**Precaution:** Si no puede leer ingles, pregunte a su supervisor sobre las instrucciones apropiadas antes de trabajar con este producto.

**Caution:** Contiene Methyl Carbitol, Overexposure may cause eye and skin irritation. If swallowed can cause irritation, nausea and stomach distress.

**Keep out of reach of children**

For additional information see material safety data sheet (MSDS)

**First Aid**

**External:** Flush skin with plenty of cool running water for at least 15 minutes.

**Eyes:** Immediately flush with plenty of cool running water. Remove contacts if applicable. Continue flushing for at least 15 minutes, holding eyelids apart.

**Internal:** If swallowed, DO NOT induce vomiting. Rinse mouth, then immediately drink 1 to 2 large glasses of water or milk. Never give anything by mouth to an unconscious person.

**Inhalation:** Immediately move to fresh air.

**Call a poison control center or physician immediately**

**For emergency medical information, call toll free:** 1-800-327-2205

**Formula contains no phosphorous**

Contains:

- **CAS#**
  - 113-8-7
  - Mixture
  - 7783-2-0

- **Ingredients**
  - Diethylene Glycol Methyl Ether
  - Polyethylene Emulsion
  - Polyacrylic Emulsion
  - Water

**ECHOLAB**

Institutional Division
Echolab Inc., Echolab Center

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