

<b>Safety Manual</b> <b>Hazard Communication Program</b>
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Policy Section No.: 23  
Revision No.: 3

**Effective:** 06-99  
**Revision Date:** 08-15  
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## **HAZARD COMMUNICATION PROGRAM**

### **1 Purpose and Scope:**

- 1.1 To ensure information about the dangers of all hazardous chemicals used by Therma is known by all affected employees, the following hazardous information program has been established. Under this program, you will be informed of the contents of the OSHA Hazard Communication standard, the hazardous properties of chemical with which you work, safe handling procedures, and measures to protect yourself from these chemicals.
- 1.2 This program applies to all work operations in our company where you may be exposed to hazardous chemical under normal working conditions or during an emergency situation. All work units of this company will participate in the Hazard Communication Program. Copies of the program are contained in the EHS Manual and in each SDS Binder and are available upon request from the Safety Department.
- 1.3 This program is in accordance with Hazard Communication Standard, 29 CFR 1910.1200.

### **2 Responsibility:**

- 2.1 The Safety Department Manager is the program coordinator, with overall responsibility for the program, including reviewing and updating this plan as necessary.
- 2.2 It is the responsibility of the Safety Department Manager to obtain updates of Proposition 65 listed chemicals and provide new information that may affect any employee.
- 2.3 It is the responsibility of all Project Managers and/or Superintendents to ensure that a list of hazardous substances and all Safety Data Sheets (SDS) are obtained prior to any required work.
- 2.4 In the event of any new introduced and potential health and safety exposure, it is the responsibility of the Project Manager and/or Superintendent to inform their crew and the Safety Department Manager of this information.

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- 2.5 It is the responsibility of the Project Manager to inform the Safety Department Manager where additional safety and health training may be necessary on a job site.
- 2.6 It is responsibility of the Facilities Manager to ensure all outside contractors work safely in our campus and to protect our employees from chemicals used by outside contractors' procedures.
- 2.7 It is the responsibility of the supervisor to ensure all employees on site are trained regarding the presence of hazardous chemicals.

### 3 **Policy:**

- 3.1 Safety Data Sheet (SDS):
  - 3.1.1 The supervisor shall obtain legible copies of all SDSs from the Safety Department for those hazardous substances that employees may be exposed to. These copies shall be in a location where employees may easily read them, during all work shifts.
  - 3.1.2 If SDSs are missing or new hazardous substances(s) in use do not have an SDS, or if an SDS is incomplete, contact the Facilities Manager of the customer site or the Safety Department Manager immediately to request a new SDS.
  - 3.1.3 If a particular location requires an SDS and/or the data sheet can not be obtained, no employee shall be permitted in that location.
  - 3.1.4 SDS for new chemicals introduced into the work site shall be forwarded to the Safety Department.
  - 3.1.5 The Safety Department shall review new SDSs for carcinogenic or extremely hazardous chemicals and shall inform employees how they will be protected.
  - 3.1.6 The Safety Department shall manage the listings of chemicals.
  - 3.1.7 The Safety Department shall maintain the SDS Master.
  - 3.1.8 When new chemicals are received, or new information has become obtained for an existing SDS, the Safety Department will update the SDS Master (including date the chemicals that were introduced or updated).
- 3.2 List of Hazardous Substances:

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3.2.1 It is the responsibility of the supervisor/project manager to obtain any/all SDSs from these resources:

3.2.1.1 Subcontractor.

3.2.1.2 General Contractor.

3.2.1.3 Customer.

3.2.1.4 Hazardous Substance list used by Therma.

3.2.2 It is the responsibility of the supervisor to ensure all employees are informed of all known hazardous substances.

3.2.3 It is the responsibility of the supervisor to complete a hazardous substance inventory prior to starting any job.

3.2.3.1 The List of Hazardous Substances will be kept in a location that is accessible to all employees.

### 3.3 Labels and Other Forms of Warning:

3.3.1 Before hazardous substance containers are released to the work area, verify that all primary and secondary containers are labeled.

3.3.2 The Primary Container shall address the following: Identity of the hazardous substance(s), applicable hazard warnings, and name/address of the manufacturer.

3.3.3 The Secondary Container shall address the following: Identity of the hazardous substance(s), and applicable hazard warnings.

3.3.4 To address exposure to Proposition 65 chemicals, the Safety Department Manager will provide clear and reasonable warnings to individuals prior to exposure by means of posting signs conspicuously, labeling consumer products, and training employees.

3.3.5 Labels shall be legible and in English. For non-English speaking, provisions shall be made to provide information in the native language.

3.3.6 Container labels shall not be defaced or removed.

### 3.4 Employee Information and Training:

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3.4.1 All new employees shall receive hazard communication training at the time of their initial assignment and whenever a new chemical is introduced into their work area.

3.4.2 Prior to starting work in a location which contains hazardous chemicals, all employees shall attend a health and safety-training. The training will provide information on the following:

- 3.4.2.1 The requirements of the hazard communication regulation, including the employees' rights under the regulation.
- 3.4.2.2 The location and availability of the written hazard communication program.
- 3.4.2.3 Any operation in the work area, including non-routine tasks, where hazardous substances or carcinogens/reproductive toxins are present and exposures are likely to occur.
- 3.4.2.4 Method and observation techniques used to determine the presence or release of hazardous substances in the work area.
- 3.4.2.5 Protective practices the company will take to minimize or prevent exposure to these substances.
- 3.4.2.6 How to read labels and review SDSs in order to obtain hazard information.
- 3.4.2.7 Information of the physical and health effects of the potential hazardous substances exposure.
- 3.4.2.8 Symptoms of overexposure.
- 3.4.2.9 Measures employees need to put into practice to reduce or prevent exposure to hazardous substances by engineering controls, work practices, and use of personal protective equipment (PPE).
- 3.4.2.10 Emergency and first aid procedures to follow if employees are exposed to hazardous substances.
- 3.4.2.11 The location and interpretation, if needed, of warning signs or placards to communicate that a chemical known to cause cancer or reproductive toxicity is used in the workplace.

3.4.3 Employee training documentation shall be maintained by the Safety Department Manager. Documentation shall include the employee's name, a brief description of the training and trainer's name. Copies of documentation shall be maintained in the employee's individual training file.

### 3.5 Hazardous Non-routine Tasks:

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3.5.1 If an employee is required to perform a hazardous non-routine task, the affected employee shall be given information by their supervisor on hazards to which they may be exposed during such an activity.

3.5.2 The non-routine task shall address the following information:

3.5.2.1 Specific hazards.

3.5.2.2 Measures the company has taken to reduce the risk of these hazards, such as providing respiratory protection program, and establishing emergency procedures.

3.5.3 The supervisor shall complete a Pre-task Hazard Plan for all hazardous non-routine tasks.

3.5.3.1 Pre-task Hazard Plan shall be reviewed with all affected employees prior to starting the task.

3.6 Labeled/Unlabeled Pipes (if applicable):

3.6.1 Above-ground pipes transporting hazardous substances (gases, vapors, liquids, semi-liquids, or plastics) shall be identified in accordance with T8 CCR, Section 3321, and the Identification of Piping.

3.6.2 Other above-ground pipes that do not contain hazardous substances but may have associated hazards if disturbed or cut (i.e., steam lines, oxygen lines) shall be addressed as follows:

3.6.2.1 The location of the pipe system or other known safety hazard.

3.6.2.2 The substance in the pipe.

3.6.2.3 Potential hazards.

3.6.2.4 Safety precautions.

3.7 Outside Contractors:

3.7.1 Contractors will be informed of our Hazard Communication Policy to ensure they work safely in our campus and to protect our employees from chemicals brought onsite by outside contractors.

3.7.2 Outside contractors shall be informed of hazardous substances, including Proposition 65 chemicals, to which they may be exposed while on the job site.

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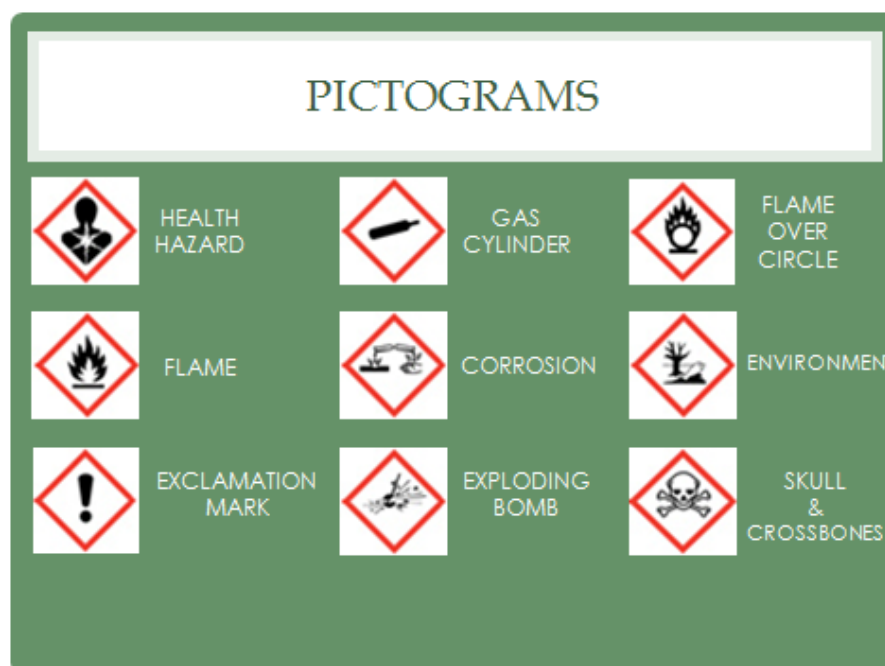
3.7.3 Outside contractors shall have available SDSs of chemical/substances brought onto our campus.

3.7.4 Outside contractors shall be informed of protective measures the employees should take to minimize the possibility of exposure.

#### 4 Identification Systems:

##### 4.1 Global Harmonized System of Classification and Labeling of Chemicals (GHS)

Specific sections of GHS labels include the following:



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## FLAME OVER CIRCLE

- Oxidizers



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## FLAME

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides



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## EXPLODING BOMB

- Explosives
- Self-Reactives
- Organic Peroxides



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## SKULL AND CROSSBONES

- Acute Toxicity (fatal or toxic)



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## CORROSION

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals



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## GAS CYLINDER

- Gases Under Pressure



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## HEALTH HAZARD

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity



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## ENVIRONMENT

- Aquatic Toxicity
  - (Non-Mandatory)



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## EXCLAMATION MARK

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)



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## LABEL EXAMPLE

Xyz Chemical Co.



Warning

Flammable Liquid and Vapor

Harmful if Swallowed

May Cause Damage to Organs (Liver)

May Cause Damage to Organs through prolonged or repeated exposure (Heart)

First Aid

If swallowed

If on skin


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## SAFETY DATA SHEET (SDS)




- |   |  |
|---|--|
| 1. Identification of the substance or mixture and of the supplier | 10. Stability and reactivity   |
| 2. Hazard identification  | 11. Toxicological  |
| 3. Composition/information on ingredients Substance/Mixture       | 12. Ecological information   |
| 4. First aid measures   | 13. Disposal considerations  |
| 5. Firefighting measures  | 14. Transport information  |
| 6. Accidental release measures                                    | 15. Regulatory information   |
| 7. Handling and storage   | 16. Other information including information on preparation and revision of the SDS |
| 8. Exposure controls/personal protection                          |  |
| 9. Physical and chemical properties                               |  |

### 4.2 NFPA – National Fire Protection Association Labeling System

	Health Hazard	
	4	Very short exposure could cause death or serious residual injury even though prompt medical attention was given.
	3	Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
	2	Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
	1	Exposure could cause <a href="#">irritation</a> but only minor residual injury even if no treatment is given.
	0	Exposure under fire conditions would offer no hazard beyond that of ordinary <a href="#">combustible</a> materials.

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	Flammability	
	4	Will rapidly or completely vaporize at <a href="#">normal pressure and temperature</a> , or is readily dispersed in <a href="#">air</a> and will burn readily.
	3	Liquids and solids that can be ignited under almost all ambient conditions.
	2	Must be moderately heated or exposed to relatively high temperature before ignition can occur.
	1	Must be preheated before ignition can occur.
	0	Materials that will not burn.
	Instability <sup>1</sup>	
	4	Readily capable of detonation or of <a href="#">explosive decomposition</a> or reaction at <a href="#">normal temperatures and pressures</a> .
	3	Capable of detonation or <a href="#">explosive</a> reaction, but requires a strong initiating source or must be heated under confinement before initiation, or <a href="#">reacts explosively with water</a> .
	2	Normally unstable and readily undergo violent <a href="#">decomposition</a> but do not detonate. Also: may <a href="#">react violently with water</a> or may form potentially <a href="#">explosive mixtures</a> with water.
	1	Normally stable, but can become unstable at elevated temperatures and pressures or may <a href="#">react with water with some release of energy</a> , but not violently.
	0	Normally stable, even under fire exposure conditions, and are not reactive with water.
<p><sup>1</sup> Prior to 1996, this section was titled "Reactivity". The name was changed because many people did not understand the distinction between a "reactive hazard" and the "chemical reactivity" of the material. The numeric ratings and their meanings remain unchanged.</p>		
	Special Hazards	
	<p>This section is used to denote special hazards. There are only three NFPA 704 <b>approved</b> symbols:</p>	

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	<b>OX</b>	This denotes an <a href="#">oxidizer</a> , a <a href="#">chemical</a> which can greatly increase the rate of <a href="#">combustion</a> /fire.
	<b>SA</b>	This denotes gases which are <a href="#">simple asphyxiants</a> . The only gases for which this symbol is permitted are <a href="#">nitrogen, helium, neon, argon, krypton, and xenon</a> . The use of this hazard symbol is optional.
	<b>W</b>	<a href="#">Unusual reactivity with water</a> . This indicates a potential hazard using water to fight a fire involving this material. When a compound is both water-reactive and an <a href="#">oxidizer</a> , the W/bar symbol should go in this quadrant and the OX warning is placed immediately below the NFPA diamond.

Some organizations use other symbols, abbreviations, and words in the white Special Hazards section. NFPA 704 permits the use of additional symbols, but they must be placed **outside** of the NFPA diamond. The following symbols are **not** compliant with NFPA 704, but we present them here in case you see them on an MSDS or container label.

<b>ACID</b>	This indicates that the material is an <a href="#">acid</a> , a <a href="#">corrosive material</a> that has a <a href="#">pH</a> lower than 7.0
<b>ALK</b>	This denotes an alkaline material, also called a <a href="#">base</a> . These caustic materials have a <a href="#">pH</a> greater than 7.0
<b>COR</b>	This denotes a material that is <a href="#">corrosive</a> (it could be either an acid or a base).
	This is another symbol used for <a href="#">corrosive</a> .
	The skull and crossbones are used to denote a <a href="#">poison</a> or <a href="#">highly toxic</a> material. See also: <a href="#">CHIP Danger symbols</a> .

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	The international symbol for radioactivity is used to denote radioactive hazards; radioactive materials are extremely hazardous when <a href="#">inhaled</a> .
	Indicates an <a href="#">explosive</a> material. This symbol is somewhat redundant because explosives are easily recognized by their <a href="#">Instability Rating</a> .