



SF State Hazard Communication Program



San Francisco State University
Environment, Health & Safety
Rev. 3 March 2024

Introduction

San Francisco State University (SFSU or University) has developed this Hazard Communication Program to comply with the Cal/OSHA Hazard Communication Standard (California Code of Regulations, Title 8, General Industry Safety Order, Section 5194). Components of the program include labeling of hazardous substances in the workplace, providing information such as Safety Data Sheets (SDSs) for hazardous substances, and training employees on chemical hazards in the workplace

The Hazard Communication Standard (HazCom) requires employers to alert employees of the existence of potentially dangerous chemical substances in the workplace and the proper means and methods to protect themselves against exposure. Hazardous substances include chemicals, paints, inks, cleaning agents, asbestos containing material, compressed gases, and others.

Table of Contents

1.0	PURPOSE AND SCOPE OF THIS PROGRAM	1
1.1	COVERED EMPLOYEES, OPERATIONS, AND SUBSTANCES	1
1.2	PARTIALLY EXEMPTED OPERATIONS AND EXEMPT SUBSTANCES	1
2.0	RESPONSIBILITY FOR IMPLEMENTING HAZCOM	2
2.1	FACULTY AND STAFF SUPERVISORS	2
2.2	EMPLOYEES.....	2
2.3	ENVIRONMENT, HEALTH & SAFETY DEPARTMENT	3
3.0	CONTAINER LABELS AND WARNINGS	3
3.1	MANUFACTURER ORIGINAL LABELS	3
3.2	CONTAINER LABEL REQUIREMENTS	3
3.3	NON-HAZARDOUS SUBSTANCES	4
3.4	UNLABELED PIPES	4
3.5	ALTERNATIVE LABELING METHODS (FOR LABORATORIES)	4
4.0	SAFETY DATA SHEETS	5
4.1	SDS REQUIREMENTS.....	5
4.2	OBTAINING SDSs.....	5
4.3	TRADE SECRETS.....	5
5.0	INVENTORY OF HAZARDOUS SUBSTANCES	5
5.1	INVENTORY LISTING	5
5.2	INVENTORY MAINTENANCE	6
5.3	AVAILABILITY OF THE INVENTORY TO EMPLOYEES.....	6
6.0	HAZARD COMMUNICATION INFORMATION AND TRAINING	7
6.1	EMPLOYEE TRAINING.....	7
6.2	FREQUENCY OF TRAINING	8
6.3	RECORDKEEPING OF TRAINING	8
6.4	OTHER REQUIRED HAZARD COMMUNICATION TRAINING – NON-ROUTINE OPERATIONS	9
7.0	INFORMING CONTRACTOR AND CONTRACT WORKERS	9
APPENDIX A	—REVIEW AND AMENDMENT LOG	11
APPENDIX B	—DEFINITIONS	13
APPENDIX C	—PICTOGRAMS	17

Intentionally Left Blank for Double-sided Printing

1.0 Purpose and Scope of This Program

The purpose of the written Hazard Communication Program is to describe our program of informing employees about these topics:

- ◆ employee rights under the Right-To-Know law,
- ◆ how to understand chemical labels and safety data sheets
- ◆ hazardous substances they may encounter in the workplace,
- ◆ potential harmful effects of these substances and
- ◆ appropriate control measures.

1.1 Covered Employees, Operations, and Substances

This Hazard Communication Program applies to:

- (1) Hazardous chemicals purchased and used by SFSU employees;
- (2) All non-laboratory SFSU employees;
- (3) Hazardous substances purchased and used by other SFSU administrative units and contractors performing work in any University controlled work space;
- (4) For the purposes of this program, substances that have a manufacturer's SDS

"Hazardous chemical" means any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified. See Appendix B for more definitions.

1.2 Partially Exempted Operations and Exempt Substances

- (1) Research laboratory operations are partially exempted from the provisions of this Hazard Communication Program because they are addressed under the Chemical Hygiene Plan.

Such research laboratory operations **shall**;

- ▶ Ensure that labels are not removed or defaced (see Section 3.0), and
- ▶ Maintain SDSs and ensure SDSs are available to employees (see Section 4.0).
- ▶ Maintain a current inventory of hazardous substances used or stored (see Section 5.0).

Refer to the SFSU Chemical Hygiene Plan for specific requirements affecting laboratory employees. This plan is available online.

- (2) The following substances are exempt from this program per §5194 (b)(5):
 - ▶ Hazardous waste;
 - ▶ Tobacco or tobacco products;
 - ▶ Wood or wood products, including lumber which will not be processed and the only hazard they pose to employees is the potential for flammability or combustibility;

- ▶ Articles (see definition in Appendix B of this program);
- ▶ Food, drugs or cosmetics intended for personal use while in the workplace; and
- ▶ Consumer products packaged for distribution to, and use by, the general public, provided that employee exposure to the product is not significantly greater than the consumer exposure occurring during the principal consumer use of the product (i.e. White-Out and spray paint used for short, one-time applications).

2.0 Responsibility for Implementing HazCom

Departments and other administrative units are required to maintain an inventory of the hazardous materials they use or store in areas under their jurisdiction.

2.1 Faculty and Staff Supervisors

Supervisors and managers are responsible for implementing the Hazard Communication Program at the local operational level and ensuring the safe use of hazardous substances for all areas and employees under their supervision.

Responsibilities include the following:

- (1) Identifying hazardous substances present in the work area
 - ▶ Maintaining an inventory list of hazardous substances present in the work area.
 - ▶ Ensuring hazardous substances are appropriately labeled or posted.
- (2) Obtaining Safety Data Sheets (SDSs) for hazardous substances matching the inventory and making sure that SDSs are available to their employees.
- (3) Training employees on labeling and storage expectations, physical hazards, health hazards, safe handling procedures, and emergency procedures for the hazardous substances they work with.
- (4) Enforcing safe behavior and adherence to established safety procedures.
- (5) Adequately informing any non-University personnel sharing the same work area of the hazardous substances to which they may be exposed while performing their work.

2.2 Employees

Employees are responsible for knowing the hazards and precautionary procedures for the hazardous substances used in their work area. If unsure, employees must ask their supervisor or Environment, Health & Safety (EH&S) department before working with materials they are not familiar with. Expectations include the following:

- (1) Completing job-specific training before working with hazardous substances.
 - ▶ Knowing how to get Safety Data Sheets and inventory of hazardous substances
- (2) Planning and conducting operations in accordance with established procedures and good safety practices.
- (3) Using personal protective equipment and clothing in accordance with prescribed training.

2.3 Environment, Health & Safety Department

EH&S is responsible for providing resources (i.e., reference materials) and technical support including the following:

- (1) Developing and implementing the HazCom Program and performing an annual review;
- (2) Assisting supervisors in identifying hazardous substances present in the work area and evaluating potential hazards of operations;
- (3) Ensuring **Hazard Communication Basics** training for employees is available online;
- (4) Assisting supervisors and departments with job-specific hazardous substance safety training for employees under the Hazard Communication Program;
- (5) Recommending appropriate engineering controls, administrative controls and personal protective equipment.

3.0 Container Labels and Warnings

Every container of a hazardous substance must be labeled, tagged, or marked to identify the substance and to provide appropriate warnings. Additional information on labeling requirements and pictograms are available on OSHA's website.

- ▶ California's HazCom Standard incorporates Appendix C in 29 CFR1910.1200: [OSHA Appendix C-Mandatory](#)
- ▶ Appendix C of this SFSU HazCom program has information concerning the pictograms associated with strictly defined hazards in the May 2013 revision of the California Hazcom Standard.

3.1 Manufacturers' Original Labels

Do not accept hazardous substances in their original containers if they are not properly labeled. The manufacturer's original label **shall** provide the following information.

- ▶ Identity of the hazardous substance;
- ▶ Signal word;
- ▶ Hazard statement(s);
- ▶ Pictograms (see Appendix C);
- ▶ Precautionary statement(s); and
- ▶ Name and address of the manufacturer, importer or responsible party.
- ▶ their probable hazardous properties. See Chemical Hygiene Plan.

Primary Container: The original manufacturer's container.

Transfer Container: A secondary container into which a material from the 'primary container' is placed or transferred.

3.2 Container Label Requirements

- (1) The label must identify the contents AND include the most significant hazard(s). In addition, labels shall be legible, in English, and prominently displayed on the container.
- (2) The original label **shall not** be removed or defaced unless the container is immediately marked with the required information.
 - ▶ The old label(s) must be completely removed or defaced so the new label is clearly identifiable.
 - ▶ The ink, sticker, or tag with the information must be of a type that it is not easily rubbed off or otherwise rendered illegible.
- (3) Synthesized substances, byproducts or mixtures created in labs, workshops, or art studios must be labeled with the contents of the mixture (e.g., Grignard reagent) or a useful generic description and its probable hazardous properties.

3.2.1 Labeling Primary and Secondary (Transfer) Containers

Container Label Information	Primary Container	Transfer Container
Identity of the hazardous substance(s)	✓	✓
Applicable hazard warnings	✓	✓
Name and address of manufacturer	✓	---

3.3 Non-hazardous Substances Labeling

Non-hazardous liquids and other substances (e.g., distilled water or Alconox) found in hazardous materials areas must also be labeled in order to avoid confusion. Standard salt or sugar water cannot be distinguished from acetone or dilute hydrochloric acid, etc. by visual means alone. However, including hazard information or pictograms is not necessary.

3.4 Unlabeled Pipes

SFSU requires all pipes within a work area to be identified and labeled whether or not they contain hazardous substances.

3.5 Alternative Labeling Methods (for Laboratories)

See the SFSU Chemical Hygiene Plan for alternate labeling options.

Occasionally a container is too small or slick to fit a label with the required information. In this case, the tray, beaker, etc. holding the small containers must have the proper labeling. The individual containers, vials, etc. still need to be marked with enough information to identify where they came from in case of separation from the larger container or tray.

4.0 SAFETY DATA SHEETS

The purpose of a Safety Data Sheet (formerly MSDS) is to provide health and safety data about a specific hazardous substance. The Safety Data Sheet or SDS discloses the chemical composition, physical hazards, health hazards, and other information about a hazardous substance or material as specified by OSHA.

4.1 SDS Requirements

- (1) A SDS **must** be available for every hazardous substance used in a work area and be accessible to employees.
- (2) SDSs shall be in English and contain the following information as specified in:
[Mandatory Appendix D Quick Fact](#)
- (3) If employees travel between workplaces, the SDSs may be kept at a central location (e.g., shop) as long as employees are able to obtain the required information in an emergency.

4.2 Obtaining SDSs

- (1) A SDS **must** be provided by the manufacturer/importer/distributor with or before the initial shipment of the hazardous substance(s) and with or before the first shipment after an SDS is updated.
- (2) If the SDS is not provided with the shipment, the purchaser (e.g., laboratory/shop supervisor) **must** obtain one from the manufacturer, importer or distributor prior to use of the purchased material.
- (3) Supervisors must ensure employees can obtain SDSs from the following sources:
 - ▶ An SDS file or binder in work area
 - ▶ A computer file or website accessible to all employees

4.3 Trade Secrets

Manufacturers and importers may withhold the specific chemical identity of a hazardous substance with certain “trade secret” provisions. Contact EH&S for assistance if information in an SDS is withheld as a “trade secret.”

5.0 Inventory of Hazardous Substances

Locations where hazardous materials used or stored must have an up-to-date copy of their inventory and a copy of the current safety data sheet (SDS) for each hazardous substance.

5.1 Inventory Listing

- (1) List each hazardous material by the name shown on the original manufacturer’s label.
 - ▶ The names on the manufacturer’s label, its Safety Data Sheet, and inventory listing should match.
 - ▶ Other names may be cross-referenced on an index as long as the name on the inventory entry matches the label name.

- (2) Delete materials no longer present from the inventory.

EH&S submits a hazardous materials inventory to the City and County of San Francisco as part of the SFSU Hazardous Materials Business Plan annual update. This is due February 15 each year.

5.2 Inventory Maintenance

- (1) RSS "CHEMICALS" laboratory inventory management software is available to facilitate maintaining an up to date chemical inventory using QR codes to electronically enter and delete chemical containers from the inventory. For more information visit the EHS website and search for "Risk and Safety Solutions".
- (2) Departments or groups who do not use RSS CHEMICALS to manage their chemical inventory must submit an updated chemical inventory to EH&S by Feb 1 of each year.
- (3) Faculty and staff who are responsible for rooms where hazardous materials are stored (including compressed gases) must maintain an accurate inventory of these materials.
- (4) As an alternative, the Building Coordinator may maintain a list of cleaners and other chemicals used in the building by individual departments or custodial services. This can work for buildings with primarily offices and classrooms with no shops or labs where chemicals are frequently used as part of occupant job duties.
 - ▶ Some of these products or substances may have an SDS that should be available to building occupants either in an online folder or printout.

5.3 Availability of the Inventory to Employees

The hazardous substance inventory for a specific university location must be available to personnel working in the area either in a paper form or online.

- (1) This inventory is available to all employees.
- (2) Principal Investigators (PIs) and Supervisors must maintain a current inventory of the hazardous substances in their own areas available for their staff and students.
- (3) For departments with few hazardous materials, the inventory may be maintained by the department office or by the Building Coordinator, who can make it available to building occupants instead of having individual departments do so.

Hazardous and toxic substances are defined as those chemicals present in the workplace which are capable of causing harm. In this definition, the term 'chemicals' includes dusts, mixtures, and common materials such as paints, fuels, and solvents.

6.0 HAZARD COMMUNICATION INFORMATION AND TRAINING

All faculty, staff and students who may come into contact with hazardous substances **shall** be trained in safe handling procedures, health and safety hazards, labeling, SDSs and personal protective equipment.

6.1 Employee Training

Employees are required to complete the assigned training as follows:

- ▶ All employees must complete online **Hazard Communication Basics** training provided by the University
- ▶ Selected employees using hazardous substances in the workplace must also complete scheduled **Job-specific Hazard Communication** training provided by their department, supervisor or designee before they are exposed to the hazards of the job, and within 30 days of starting work and when new hazards are introduced.

Employee HazCom training includes the topics listed below and is divided between the online and in-person portions.

(1) **Hazard Communication Basics** (online assignment)

- ▶ Employers shall inform employees of their rights:
 - To personally receive information regarding hazardous substances to which they may be exposed, according to the provisions of this section;
 - For their physician or collective bargaining agent to receive information regarding hazardous substances to which the employee may be exposed according to provisions of this section (of the standard);
 - Against discrimination due to the employee's exercise of the rights afforded pursuant to the provisions of the Hazardous Substances Information and Training Act.
- ▶ Overview of §5194–Hazard Communication Standard
 - Details of the hazard communication program developed by the employer (CSU), including an explanation of the labels on shipped containers and the workplace container GHS labeling system.
 - How to read safety data sheets, and how to obtain and use the appropriate hazard information.

(2) Job-specific Chemical Hazards and Precautions (in-person)

- ▶ Locations in their work area where hazardous chemicals are present
- ▶ Physical and health hazards of the hazardous substances employees use or come into contact with as part of their job.
- ▶ Measures employees must use to protect themselves from these chemical hazards. These include the specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency
- ▶ Location and availability of the written hazard communication program, including the inventory of hazardous substances and safety data sheets (SDS)
- ▶ The methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area. The most common examples are listed below:
 1. **Visually** - by spilled liquid or solid contents, discoloration of surfaces, smoke mist, or fire around a surface
 2. **Audibly** - by the sound of escaping gases, or the sounds of chemical reactions such as fizzing, popping or cracking
 3. **By smell** - when the chemical being released has a detectable odor or causes a fire. *(Chemicals whose odors are detectable at concentrations below dangerous levels are said to have good warning properties.)*
 4. **By physical effects**
 - Contact with eyes or skin - irritation, burning, itching or pain and severe cold (frostbite) from cryogenic substances
 - Inhalation - throat or lung irritation, coughing or wheezing
 - Illness - feeling dizzy, lightheaded, sick or nauseous, experiencing loss of balance or a drunken feeling
 5. **By taste** - if the material has been ingested or sensed by the nose or mouth
 6. **Using gas monitoring detectors** for oxygen, CO, CO₂, and flammable gases
 7. **Using industrial hygiene exposure monitoring devices** (badges or pumps) for specific toxic dusts, mists, vapors, or gases

6.2 Frequency of Training

Employees **shall** be trained on hazardous substances in their work area:

- ▶ Upon initial assignment and
- ▶ Whenever a new hazard is introduced into the work area.

6.3 Training Records

SF State uses the CSU Learn learning management system (LMS) to maintain training records for Hazard Communication Basics training.

Records for instructor-led HazCom Basics training **must** be sent to EH&S.

Job-specific chemical safety training for hazardous substances used or present in an employee's workplace is to be provided by the supervisor, manager or department head.

Records of this training is maintained by the department.

6.4 Other Required Hazard Communication Training – Non-Routine Operations

Supervisors are required to inform employees of the hazards, preparations for reducing risk, and safety procedures for non-routine tasks in their work area. Examples of ways to prepare for the tasks include the following:

- ▶ Requiring the presence of another employee during the task
- ▶ Ensuring ventilation is working and adequate to the task
- ▶ Inspecting equipment or chemical containers before use
- ▶ Having the necessary personal protective equipment, chemical transport container, etc.

7.0 INFORMING CONTRACTORS

Outside contractors are also covered under the HAZCOM Standard and must be informed of any potential chemical hazards their workers could come across during their work. **The SFSU Project Manager is responsible for providing this information to contractors working in areas where hazardous materials could pose a health or safety risk to contractor employees.**

Contractors who bring hazardous materials into a Department work area are expected to inform and provide the SFSU Project Manager with a chemical inventory and associated SDSs.

The SFSU Project Manager is responsible for ensuring that EH&S has this information before the work starts.

For information and follow up concerning contractor chemicals or materials, contact EH&S at 415-338-2565. Upon request, EH&S can contact the SFSU Project Manager to forward the information to the department.

INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

Appendix A – Review and Amendment Log

The SFSU Hazard Communication Program must be reviewed annually and updated as needed

Date	Amendments	Pages/Sections	Initials
11/15/2019	Established revised Hazard Communication Program for SF State	Entire document	MM LEV
06/30/2021	Removed the text about blue binders in laboratories. EHS is moving toward centralized location on EHS website.	Page 1	LEV
06/30/2021	Moved Appendix C, Program Review, to Appendix A. Changed appendix letters as required to reflect change in location.	Appendix	MM LEV
06/30/2021	Removed old link to RSS Chemicals handout from CSUSB. Sending readers to the EH&S website will assure them of access to the most current information	Page 6	LEV
06/30/2022	No Changes	N/A	LEV
01/24/2024	<p>Included the training title in the statement about online training being available.</p> <p>Deleted column 3 in the table of labeling requirements that listed alternative labeling methods for laboratories. Re-ordered the subsections in Section 3.</p> <p>Inventory management and availability updated to reflect current requirements and practices. Changed HMBP inventory due date to Feb. 15 annually.</p> <p>Revised this section on dept responsibilities to be applicable to the entire university not just COSE.</p> <p>Added the title of the online HazCom training “Hazard Communication Basics”.</p> <p>Removed reference to Lab Safety Fundamentals for lab workers as it is not part of HazCom training.</p> <p>Revised section on training recordkeeping</p> <p>Revised section on contractor hazmat information to specify that EH&S will contact the SFSU Project Manager to provide the necessary information upon department request.</p>	<p>Page 3, 2.3(3)</p> <p>Page 4,5 section 3</p> <p>5.3, page 6</p> <p>Page 6, 6.1</p> <p>Page 8</p> <p>Page 9, 6.3</p> <p>Page 9, 7</p>	

Appendix B – Definitions

Article	A manufactured item (1) Which is formed to a specific shape or design during manufacture; (2) which has end use functions(s) dependent in whole or in part upon its shape or design during end use; and (3) which does not release, or otherwise result in exposure to a hazardous substance under normal conditions of use or in a reasonably foreseeable emergency resulting from workplace operations.
Classification:	To identify the relevant data regarding the hazards of a chemical; review those data to ascertain hazards associated with the chemical; and decide whether the chemical will be classified as hazardous, and the degree of hazard where appropriate, by comparing the data with the criteria for health and physics hazards.
Container:	Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, tank truck or the like that contains a hazardous substance. For purposes of this section, pipes or piping systems are not considered to be containers.
Emergency:	Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment, which may or does result in a release of a hazardous substance into the workplace.
Exposure or exposed:	Any situation arising from work operation where an employee may ingest, inhale, absorb through the skin or eyes, or otherwise come into contact with a hazardous substance.
Hazard category:	The division of criteria within each hazard class.
Hazard class:	The nature of the physical, health or environmental hazard.
Hazard classification:	An evaluation of chemicals to determine the hazard classes, and where appropriate, the category of each class that applies to the chemical being classified.
Hazard statement:	A statement assigned to a hazard class and category that describes the nature of the hazards of a hazardous product, including, where appropriate, the degree of hazard.
Hazard warning:	Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the health hazards and physical hazards of the substance(s) in the container(s).
Hazardous substance:	Any substance which is a physical hazard or a health hazard or is included in the List of Hazardous Substances prepared by the Director pursuant to Labor Code section 6382.
Health hazard:	A chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. Detailed explanations of health hazards classifications can be found online: https://www.osha.gov/dsg/hazcom/appendix_a.pdf

Appendix B – Definitions






(Continued)





Immediate use:	The hazardous substance 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.
Physical Hazard:	A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. Detailed explanations of physical hazards classifications can be found online: https://www.osha.gov/dsg/hazcom/appendix_b.pdf
Pictogram:	A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical.
Precautionary statement:	A phrase (and/or pictogram) that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous product, or improper storage or handling of a hazardous product.
Proposition 65:	Also known as the Safe Drinking Water and Toxic Enforcement Act of 1986, this law requires the state to publish a list of chemicals known to cause cancer, birth defects, or other reproductive harm.
Signal word:	A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The words 'Danger' and 'Warning' are used as signal words.
Trade secret:	Any confidential formula, pattern, process, device, information, or compilation of information which gives its user an opportunity to obtain a business advantage over competitors who do not know or use it. A trade secret shall not include chemical identity information which is readily discoverable through qualitative analysis.
Work area:	A room or defined space in a workplace where hazardous substances are produced or used, and where employees are present.

Appendix C – Pictograms

Full details on the new OSHA Hazard Classification system is available on their website: [OSHA Appendix C](#)

A short version, OSHA BRIEF, is available on the website as well: [OSHA BRIEF 3636, Labels and Pictograms](#)

GHS Pictogram	Pictogram Name	Hazards Represented
	Exclamation Point	<ul style="list-style-type: none"> ▶ Irritant to eyes, skin and respiratory tract ▶ Skin sensitizer ▶ Acute toxicity (harmful)
	Health Hazard	<ul style="list-style-type: none"> ▶ Carcinogen ▶ Reproductive Toxicity ▶ Target organ toxicity ▶ Mutagenicity ▶ Aspiration toxicity ▶ (Effects usually occur over time)
	Skull and Crossbones	<ul style="list-style-type: none"> ▶ Acute toxicity (severe or fatal) ▶ (Effects can occur shortly after exposure) ▶ (Poisons)
	Corrosive	<ul style="list-style-type: none"> ▶ Corrosive and damaging to skin and eyes ▶ Chemical burns ▶ Corrosive and damaging to metals
	Flame	<ul style="list-style-type: none"> ▶ Flammables ▶ Self-reactives ▶ Pyrophorics ▶ Self-heating ▶ Emits Flammable Gas ▶ Organic Peroxides

	Gas Cylinder	<ul style="list-style-type: none">▶ Gases under pressure
	Flame Over Circle	<ul style="list-style-type: none">▶ Oxidizing gases, liquids, or solids▶ (perchlorates)
	Exploding Bomb	<ul style="list-style-type: none">▶ Explosives▶ Self-reactives▶ Organic peroxides▶ (especially reactive or shock sensitive)
	Environment	<ul style="list-style-type: none">▶ Aquatic toxicity▶ (not for human health)