

Roger Williams University Hazard Communication Plan



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ROGER WILLIAMS UNIVERSITY
HAZARD COMMUNICATION PLAN

- I. Introduction
 - II. Scope
 - III. Hazardous Chemical Labeling
 - IV. Safety Data Sheets (SDS)
 - V. Employee Information and Training
 - VI. Hazard Communication for Non-Routine Tasks and Contractors
 - VII. Location of HazCom Plan, Chemical Inventory Lists and SDS
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- Appendix A: Selected Definitions of Terms in 29 CFR 1910.1200 (“Hazard Communication”)
 - Appendix B: National Fire Protection Association (NFPA) Fire Diamond and Explanation of Symbols and Number Ratings
 - Appendix C: Hazardous Materials Identification System (HMIS) Label and Explanation of Symbols and Number Ratings
 - Appendix D: Department of Transportation (DOT) Placards and Diamonds
 - Appendix E: HazCom 2012 Pictograms
 - Appendix F: Sample Label with Six Required HazCom 2012 Components
 - Appendix G: Standard HazCom 2012 Safety Data Sheet Format
 - Appendix H: Comparison of NFPA704 and HCS2012 Labels
 - Appendix I: Creating NFA704 and HCS2012 Labels from SDS Information
 - Appendix J: Triple Rinse Procedures

I. Introduction

The Occupational Safety and Health Administration (OSHA) requires employers with hazardous chemicals in the workplace to have a written hazard communication (HazCom) plan in accordance with the Hazard Communication standard (29 CFR 1910.1200). The HazCom Plan must include site-specific information about the following topics:

- x Hazardous chemical labels and other forms of warning used onsite;
- x Safety Data Sheets (SDS);
- x Employee information and training requirements;
- x An inventory of hazardous chemicals onsite (hazardous chemical names in the inventory must match the hazardous chemical names listed on the SDS so they may be easily referenced);
- x Methods of communication of chemical hazards for non-routine tasks; and
- x Means for providing this information to onsite contractors that may be exposed to chemical hazards onsite.

OSHA defines a “hazardous chemical” as “any chemical which is a physical hazard or a health hazard.” Physically hazardous chemicals include: combustible liquids, compressed gases, explosives, flammables, organic peroxides, oxidizers, pyrophorics, reactives, and water-reactives (full definitions of these terms are included in the “Definitions” appendix of this plan). Health-hazardous chemicals are chemicals which can cause acute and/or chronic health effects in exposed employees. Health-hazardous chemicals include: carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which can damage the lungs, skin, eyes, or mucous membranes (full definitions of these terms are included in **Appendix (A)**). Roger Williams University (RWU) has both physically hazardous and health-hazardous chemicals on campus.

Beginning in 2012, the OSHA HazCom Standard has phased in the adoption of the GHS standards (Globally Harmonized System; OSHA calls these updates “HazCom 2012” to distinguish from “HazCom1994” requirements). This adoption means that the same standard formats and required elements are used in the US and around the world for safety data sheets, chemical labels, and pictograms. This HazCom Plan has been updated to reflect these changes.

II. Scope

The HazCom Plan applies to all RWU employees (including student employees) who handle hazardous chemicals as part of their regular job duties, including mailroom employees who handle sealed chemical containers / packages.

- x Hazardous substances being removed or remediated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);
- x Tobacco and tobacco products;
- x Wood and wood products, excepting wood that has been treated with a hazardous chemical and could be sawed, sanded, or cut such that wood dust is generated;
- x Articles (see Appendix A of this document for a full definition);
- x Food, alcoholic beverages, drugs in their dispensable form, cosmetics, or consumer products / hazardous substances that are for employees' personal use or consumption, or are being used / sold as intended by the manufacturer;
- x Nuisance particulates where the manufacturer can demonstrate that they do not pose a physical or health hazard;
- x Ionizing and non-ionizing radiation (IR and NIR); and
- x Biological hazards.

III. Hazardous Chemical Labeling

Hazardous chemical labels and other forms of warning that are posted on hazardous chemical containers are often the most readily visible and accessible means of hazard communication. Employees who handle hazardous chemicals as part of their routine job duties will see the labels and markings on the hazardous chemical containers every time they handle the containers. It is of utmost importance that hazardous chemical labels are present, correct, and legible, and that the employees are able to read and understand the information that is provided.

The following requirements apply to hazardous chemical container labels warning:

- x **Each hazardous chemical container label must contain, at a minimum, the following six elements (see Appendix F for sample):**
 - o **Product Identification:** Chemical Name and Product ID Number if one exists
 - o **Manufacturer Contact Information:** Name, Address, Telephone Number
 - o **Pictograms (See Appendix E):** Hazard diamonds that visually represent the GHS health and physical hazard categories
 - o **Signal Word:** One of three words to indicate relative degree of hazard: Danger, Warning, Caution (most to least hazardous)
 - o **Hazard Statement(s):** A written description of the applicable pictogram(s)
 - o **Precautionary Statement(s):** Summary of important storage, handling, and use conditions such as PPE requirements, adverse storage conditions, incompatibilities / reaction products, hazardous handling environments, etc.
- x **Hazardous chemical identity and other label information, including warnings, must be legible, prominently displayed, and written in English.**
 - o The container may be labeled in other languages as necessary, but must retain the English labeling.
- x **Other hazard warning systems that may be present on a chemical container include:**
 - o NFPA (National Fire Protection Association) fire diamonds (Appendix B);
 - o HMIS (Hazardous Materials Identification System) labels (Appendix C); and
 - o DOT (Department of Transportation) placards and diamonds (Appendix D).
- x **Portable hazardous chemical containers that are only for an employee's immediate use are not required to be labeled as noted above.**

- The employee who performed the transfer of the hazardous chemical into the portable container must be the only one who uses the portable container.
- x **Any hazardous**

As part of the HazCom2012 updates, SDS are now required to follow a specific 16 section format. This standardization makes it easier for users to find the information they are looking for. The standard section listing and a description of the information contained in each section can be found in **Appendix (G)**.

RWU is required to have an SDS for each hazardous chemical onsite. Departments that want to bring a new hazardous chemical onto campus must present the SDS to RWU EHS for review prior to bringing the hazardous chemical on campus. EHS will review the SDS for safe storage, handling, use, PPE, and disposal requirements. EHS will add the SDS to its SDS collection if the hazardous chemical can be safely accommodated onsite, and the department may then bring the hazardous chemical onto campus.

RWU catalogs and distributes SDS to its employees in the following ways:

- x RWU has a master library of RWU-specific SDS located online at the following website: <http://hq.msdsonline.com/rogerwilliamsuniversity> (known as “MSDSOnline”). Employees are provided with this website address when they take the HazCom training. A website tutorial is also provided at the training. The tutorial covers topics such as how to search for a hazardous chemical or product and how to request an SDS that is not present on the site. MSDSOnline is updated and maintained by RWU EHS on an as-needed basis.
 - o All new RWU employees receive this tutorial at their new employee orientation training. They do not receive the full HazCom training unless they are in one of the departments that handle hazardous chemicals.
- x RWU EHS maintains a master hard copy SDS library in the EHS office. Employees may access the library at any time the EHS office is open.

V. Employee Information and Training

RWU employees that handle hazardous chemicals as part of their routine job duties attend an initial HazCom training session when first hired and an annual refresher training presented by RWU EHS. Trainees include members of the following departments: Dining, Public Safety, Facilities Management, Health Services, Athletics, and the Mailroom. Training documentation is retained by EHS.

The RWU HazCom training includes the following information:

- x Rights and responsibilities as hazardous chemical users under the HazCom standard;
- x An overview of the operations in specific buildings and work area(s) that involve hazardous chemicals;
- x The location of the HazCom Plan, Hazardous chemical inventory lists, and SDS (online and . copies)
- x Methods and observations that can be used to detect the presence of a hazardous chemical;
- x The physical and health hazards of the chemicals employees may encounter in their regular job duties;
- x Explanations of the NFPA, HMIS, and DOT labeling systems;
- x Review of a sample SDS and the types of information it conveys; and

- x What to do in the event of a hazardous chemical spill (how to contact emergency services, etc.).

VI. Hazard Communication for Non-Routine Tasks (RWU Employees) and Contractors

RWU employees that will be performing non-routine tasks involving hazardous chemicals must undergo a task-and-chemical-specific version of the HazCom training prior to beginning the task. All of the topics covered in the general HazCom training must be covered as they pertain to the non-routine task. The training will be provided by the department supervisor / manager and must be documented.

Contractors working onsite at RWU that may be exposed to hazardous chemicals will be provided the following via the “Contractor” account on Traincaster:

- x Access to RWU’s SDS collection via a link to MSDSOnline;
- x Access to RWU’s HazCom Plan, which includes information about the hazardous chemical labeling systems used on campus; and
- x Access to RWU’s Public Safety Dispatch number to call in the event of a hazardous chemical emergency (x3333 for on-campus phones and 401-254-3333 for off-campus and cell phones).

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Appendix A: Definitions of Terms

The following definitions are provided by OSHA in 29 CFR 1910.1200(c) "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; and
- (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.

"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 deg. F (37.8 deg. C), but below 200 deg. F (93.3 deg. C), except any mixture having components with flashpoints of 200 deg. F (93.3 deg. C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

"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 deg. F (21.1 deg. C); or
- (ii) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 deg. F (54.4 deg. C) regardless of the pressure at 70 deg. F (21.1 deg. C); or
- (iii) A liquid having a vapor pressure exceeding 40 psi at 100 deg. F (37.8 deg. C) as determined by ASTM D-323-72.

"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
- (iii) 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;
- (iv) "Liquid, flammable" means any liquid having a flashpoint below 100 deg. F (37.8 deg. C), except any mixture having components with flashpoints of 100 deg. F (37.8 deg. C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.
- (v) "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.

"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" in 1910.109(f)(3)(i)-(iii) and 1910.109(f)(3)(iv)-(v))

Appendix D: Department of Transportation (DOT) Placards and Diamonds

The Department of Transportation (DOT) uses hazard placards and diamonds to mark its transportation vehicles and packages and containers being transported. These hazards provide a pictorial and written description of the chemical hazards associated with that container, package, or load. More than one placard or diamond may be used at once to indicate multiple hazards. The primary hazard (determined by the DOT's "Precedence of Hazard" table) will always be the uppermost diamond or placard displayed. Secondary hazards will be located beneath or adjacent the primary hazard.

The DOT placards / diamonds are pictured below:

Class 1.1 through 1.4 – Explosives	
Class 2.1 – Flammable Gas Class 2.2 – Non-Flammable Gas Class 2.3 – Toxic Gas	
Class 3 – Flammable Liquid	
Class 4.1 – Flammable Solid Class 4.2 – Spontaneously Combustible Class 4.3 – Dangerous When Wet	
Class 5.1 – Oxidizer Class 5.2 – Organic Peroxides	
Class 6.1 – Toxic Class 6.1 PIH – Poison Inhalation Hazard	
Class 6.2 – Biological Hazard	Not covered by the HazCom Plan
Class 7 – Radioactive	
Class 8 – Corrosive	
Class 9 – Miscellaneous Dangerous	

Appendix E: HazCom 2012 Pictograms

From: <https://www.osha.gov/Publications/OSHA3491QuickCardPictogram.pdf>



Appendix F: Sample Label Showing 6 Required Elements

From: <https://www.osha.gov/Publications/OSHA3636.pdf>

Keep away from heat. Do not store in direct sunlight. Do not breathe dust, fumes, or gas. Wear protective gloves. Do not eat, drink, or smoke while using this product. Rinse immediately with water for 15 minutes. Remove clothing if contaminated. Do not get in eyes. If in eyes, rinse continuously with water for 15 minutes. If inhaled, remove person to fresh air and breathe fresh air. If swallowed, do not induce vomiting. Do NOT induce vomiting. Immediate medical attention. Specific Treatment: Treat with doctor-prescribed antidote.

Fire: In case of fire: Use water spray. In case of explosion, the risk of explosion.

Great Chemical Company, 55 Main Street, An...

Appendix G: Standard SDS Format (16 Sections)

From: <https://www.osha.gov/Publications/OSHA3493QuickCardSafetyDataSheet.pdf>

Section 1. Identification includes proper identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended restrictions on use.

includes a hazard section; hazard statement; chemical; required elements regarding the

Section 2. Hazard information on ingredients as information on chemical ingredients; that section includes

Section 4. First aid measures includes important first aid measures; route, delayed, required treatment.

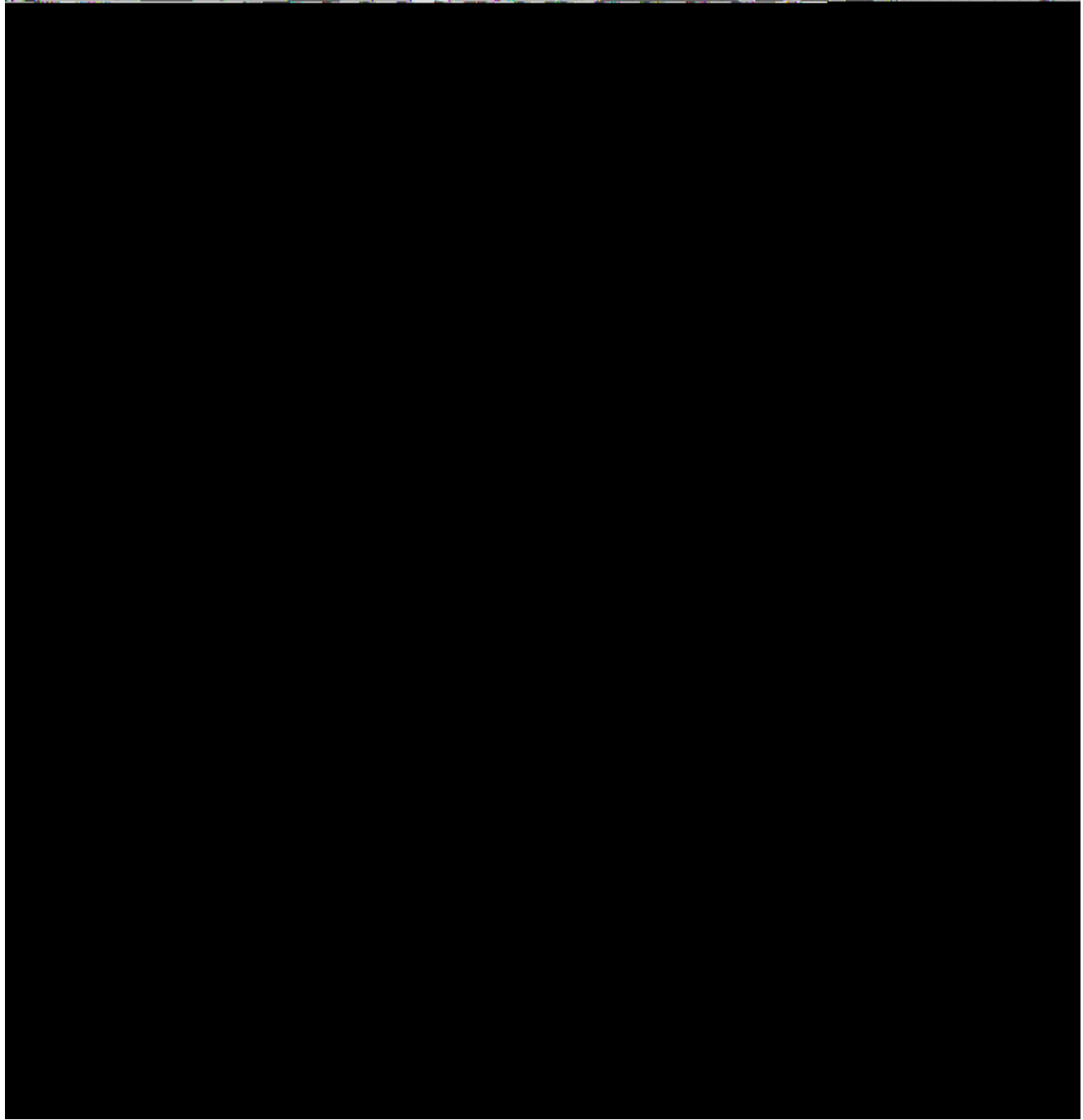
Section 5. Fire-fighting measures lists suitable extinguishing techniques; equipment; special hazards from fire

Section 6. Accidental release measures includes procedures; protective equipment; proper containment and cleanup.

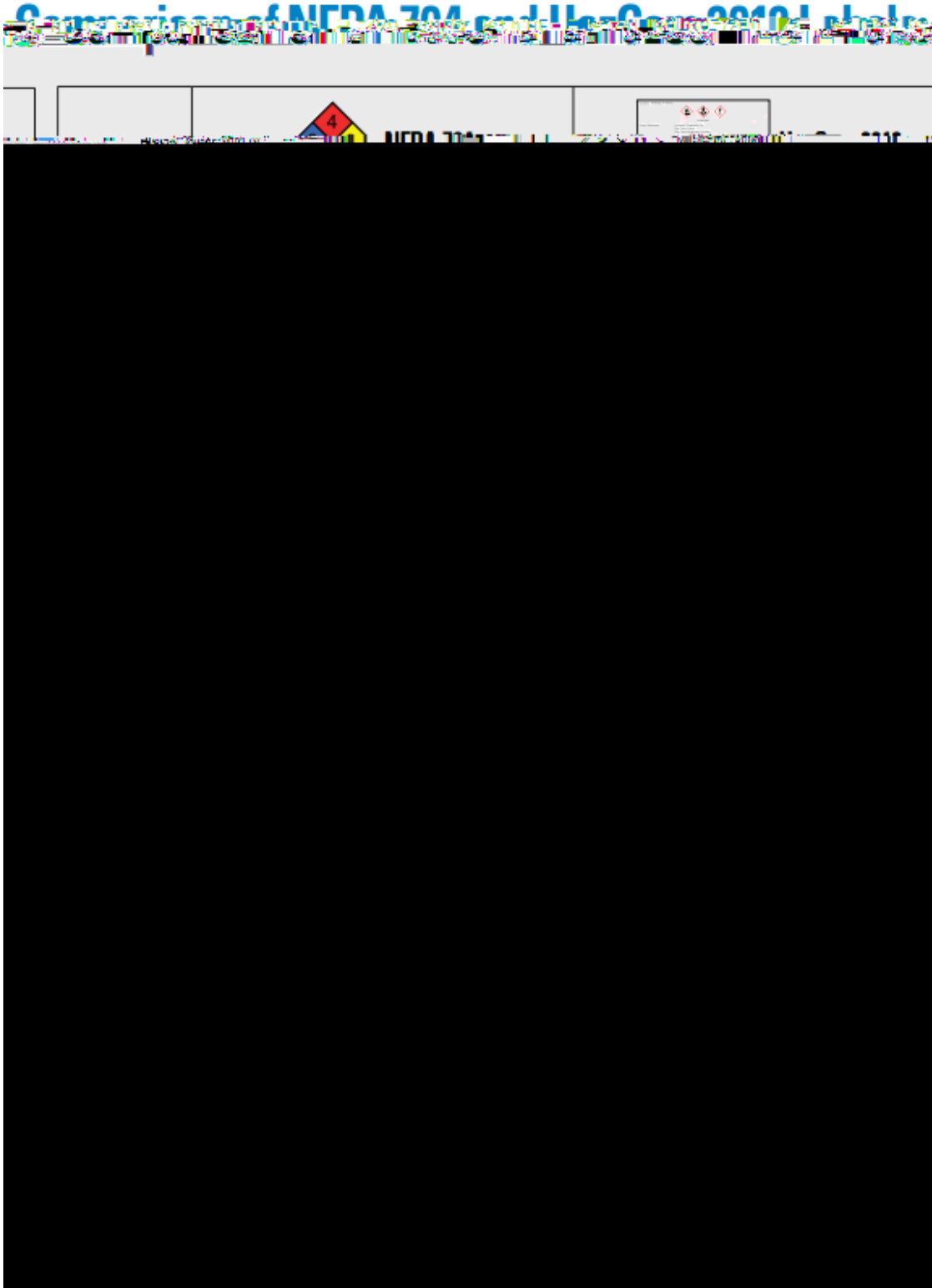
Section 7. Handling and storage includes safe handling and storage conditions.

Permissible Exposure Limits (PELs):

lists OSHA's Pe



Appendix H: Comparison of NFPA704 and HCS2012 Labels
From: <https://www.osha.gov/Publications/OSHA3678.pdf>



Appendix I: Creating NFA704 and HCS2012 Labels from SDS Information

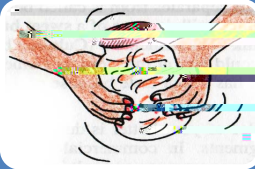
From: [https://www.osha.gov4ms2\(F\)u1\(s\)3\(ab\)licatin.os SF11\(A3678.p an\)-4\(d\)fm:](https://www.osha.gov4ms2(F)u1(s)3(ab)licatin.os SF11(A3678.p an)-4(d)fm:)

Appendix J: Triple Rinse Procedures for P-Listed Chemical Containers



Add Solvent to Container

{ At least 10% of container volume



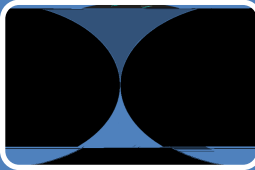
Close and Shake Container

{ Close cap completely

{ Shake vigorously for ~ 30 seconds



Empty Used Solvent (Rinsate) into Waste Container



Repeat above steps three times



Deface or remove labels completely



Recycle / dispose of container



Manage Rinsate as Haz. Waste