# University of Rhode Island Hazard Communication Plan

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#### 1. Hazard Communication for Non-Laboratory Users

The Hazard Communication Standard 29 CFR 1910.1200 (HCS) implemented by the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor requires employers to provide information to employees regarding hazardous chemicals in the workplace and the hazardous properties of these chemicals. This information must be disseminated through a hazard communication program involving labeling, safety data sheets, employee training, employee access to written records, and a written hazard communication plan. The implementation of the Hazard Communication Program will ensure all employees the "right-to-know" regarding the hazards and identities of the chemicals with which they work.

The HCS applies to any chemical that is known to be present in the workplace at the University of Rhode Island (URI) in such a manner that employees may be exposed under normal conditions of use, or in a foreseeable emergency. In accordance with OSHA regulations, laboratory employees are covered under The University of Rhode Island's Chemical Hygiene Plan and are not included in the Hazard Communication Program. The OSHA standard, 29CFR 1910.1200 sets out a procedure for hazard determination and any substance determined to be hazardous under this procedure is subject to the program. The definition of "hazardous chemical" under the standard is any chemical which is classified as a physical hazard or health hazard, a simple asphyxiant, combustible dust, or pyrophoric gas. For determination of chemical hazards associated with products not synthesized at URI, personnel should rely on the evaluation performed by the chemical manufacturer or importer transmitted via Safety Data Sheets.

OSHA's Hazard Communication Standard can be found at:

#### https://www.osha.gov/pls/oshaweb/owadisp.show\_document?p\_table=STANDARDS&p\_id=10099

The University of Rhode Island's Hazard Communication Program is designed to:

- Reduce the likelihood of injury or illness to employees by implementing specific procedures to identify and evaluate the chemical hazards in the workplace and then inform and train employees on those hazards.
- Ensure that all individuals at risk are adequately informed about the chemicals used and stored in their workplaces.
- Outline procedures for all employees working with hazardous chemicals.

The following Hazard Communication Plan was written to comply with the OSHA Hazard Communication Standard.

#### 2. Hazard Communication Responsibilities for Employees

The University of Rhode Island's Hazard Communication Program is overseen by the Environmental Health and Safety (EH&S) Coordinator, who reports to the Assistant Vice President of Enterprise Risk Management.

#### Supervisory Personnel are responsible for:

- 1. Creating and maintaining an inventory of all hazardous chemicals stored or used within their area of responsibility.
- 2. Ensuring that all hazardous chemicals/products are properly labeled, and that these labels are not removed or defaced.
- 3. Ensuring that employees have been trained on how to access and acquire Safety Data Sheets (SDSs) via Onsite Systems (which can be accessed using your URI single sign on (SSO). See Appendix F for more information.
- 4. Identifying employees under their supervision who may be exposed to hazardous chemicals under normal operating conditions or in a foreseeable emergency based on hazard assessment.
- 5. Informing employees of: Any operations in their work area where hazardous chemicals are present; the location and availability of the written Hazard Communication Plan; the chemical inventory; SDS; and the requirements of the Hazard Communication Standard.
- 6. Providing employees with training regarding hazards or practices specific to their work area at the time of their assignment and whenever a new hazard is introduced into their work area.
- 7. Determine the required personal protective equipment (PPE) for the procedures and materials in use in their area.
- 8. Ensure the proper PPE is made available to employees.
- 9. Ensure the employees are trained in the use of PPE, the PPE is properly maintained, and the employees wear the appropriate PPE where necessary/required.
- 10. Develop safe standard operating procedures for work in their areas, as well as written procedures for emergencies.
- 11. Inform outside contractors of chemical (or other) hazards that they may be exposed to while working at URI. Inform them on how to access SDSs through OnSite Systems.
- 12. Inform employees about proper performance of non-routine tasks.

#### Employees are responsible for:

- 1. Planning and conducting each operation according to the Hazard Communication Program.
- 2. Using the required personal protective equipment (PPE) and properly maintaining and storing the equipment assigned to him/her.
- 3. Reporting any exposures, injuries, or unsafe condition to his or her supervisor.
- 4. Reviewing SDS prior to using a chemical for the first time, then reviewing periodically thereafter as necessary.
- 5. Not removing or defacing labels on incoming chemical containers.
- 6. Attend required Hazard Communication training annually.
- 7. Wearing applicable PPE as instructed by his or her supervisor.

#### Environmental Health and Safety Coordinator is responsible for:

- 1. Development of the written Hazard Communication Program.
- 2. Develop a Hazard Communication training program.
- 3. Providing technical support to the departments covered by the Hazard Communication Program.
- 4. Conduct periodic safety reviews.
- 5. Provide technical assistance in the selection of personal protective equipment.
- 6. Review Hazard Communication Program at least annually and make necessary changes.

#### Contractors are responsible for:

Developing and implementing their own Hazard Communication Program and informing University of Rhode Island personnel of any chemical hazards they bring with them. They must also ensure the proper handling, use, and storage of these chemicals and provide access to SDS for them. Outside contractors must provide URI project managers and other interested parties (including EH&S) with information concerning hazardous materials to be brought into any URI facility to perform contracted work before the materials are brought onto campus.

#### 3. Hazardous Chemicals Inventory

The supervisor or designee is required to maintain a list of all hazardous chemicals known to be present in each work area (i.e., maintenance shop, storage buildings, etc.) and update the list as necessary. The inventory must identify each hazardous chemical by the primary name on the label (either chemical name or product name, but it must be consistent; i.e. if you choose to list chemicals by the common or product name, you must do so with all chemicals listed on the inventory), the manufacturer or distributor of the chemical, and chemical abstract number (CAS), the location (Building, room number, etc.), quantity, and size of the container. The inventory must be kept in the work area in a suitable format, on a log sheet, or in electronic format (inventories kept in electronic format should be printed periodically (at least annually or if major changes in the inventory are made) and posted in the work area). This inventory shall list all hazardous chemicals (this includes compressed gases) found in the work area. This inventory must be submitted upon request to EH&S.

#### 4. Labeling Requirements

The supervisor must ensure that all containers of hazardous chemicals in his/her area of responsibility are properly labeled. The chemical manufacturer/distributor is required to provide labels on all hazardous chemicals shipped. These labels should include a product identifier, signal word, hazard statement(s), pictogram(s), precautionary statement(s), and the name, address, and telephone number of the manufacturer, importer, or other responsible party.

Whenever chemicals are transferred into another container (also known as a secondary container), the container must be labeled with a "workplace label". The label must include the product identifier/full chemical product name, pictogram(s), signal word (warning or danger), and the hazard

statement. Smaller, immediate use containers, that are within the control of the employee, do not need to be labeled if they are emptied at the end of that employee's shift. Workplace labels need to be in English. If labels must be created, the labels must be durable, legible, and must be firmly affixed to the container(s). Labels should be replaced whenever they fade, peel, or otherwise deteriorate to become difficult to read. No chemical should ever be used without completely reading the label. Contents of all vessels, pipelines, storage tanks, etc. must be adequately labeled. If shipping hazardous chemicals from URI, labeling must comply with the 2012 HCS, must be shipped with a Safety Data Sheet, follow all DOT/IATA regulations, and the personnel shipping the material must have completed the appropriate training. Descriptions of required labeling elements are provided below:

- Name, Address and Telephone Number of the chemical manufacturer, importer or other responsible party.
- **Product Identifier** is how the hazardous chemical is identified. This can be (but is not limited to) the chemical name, code number or batch number. The manufacturer, importer or distributor can decide the appropriate product identifier. The same product identifier must be both on the label and in section 1 of the SDS.
- **Signal Words** are used to indicate the relative level of severity of a hazard. It alerts the user to a potential hazard. There are only two words allowed: "Danger" and "Warning". Danger is used for more severe hazards. Warning is used for less severe hazards. There will only be one signal word on the label no matter how many hazards a chemical may have. If one of the hazards warrants a "Danger" signal word and another warrants the signal word "Warning," then only "Danger" should appear on the label.
- Hazard Statements describe the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard. For example: "Causes damage to kidneys through prolonged or repeated exposure when absorbed through the skin." All of the applicable hazard statements must appear on the label. Hazard statements may be combined where appropriate to reduce redundancies and improve readability. The hazard statements are specific to the hazard classification categories, and chemical users should always see the same statement for the same hazards no matter what the chemical is or who produces it.
- Precautionary Statements describe recommended measures that should be taken to
  minimize or prevent adverse effects resulting from exposure to the hazardous chemical or
  improper storage or handling. There are four types of precautionary statements: prevention
  (to minimize exposure); response (in case of accidental spillage or exposure emergency
  response, and first-aid); storage; and disposal. For example, a chemical presenting a specific
  target organ toxicity (repeated exposure) hazard would include the following on the label:
  "Do not breathe dust/fume/gas/mist/ vapors/spray. Get medical advice/attention if you feel
  unwell. Dispose of contents/ container in accordance with local/regional/ national and
  international regulations."
- **Pictograms** are intended to convey specific information about the hazards of a chemical. Pictograms will have a black picture atop a white background within a red square frame set on a point. There are nine pictograms under the 2012 HCS, but only eight are enforced by OSHA. See Appendix A for a pictogram reference chart and Appendix B for a sample label.

Employees may encounter other rating systems such as National Fire Protection Association (NFPA) diamonds or Hazardous Materials Identification System (HMIS) labeling system. This labeling system is permitted as long as it is consistent with the requirements of the Hazard Communication Standard and the employees have immediate access to the specific hazard information as discussed in this section. Refer to Appendix D and E for sample NFPA and HMIS labels, respectively.

#### 5. Safety Data Sheets

The purpose of Safety Data Sheets (SDS) is to provide employees with detailed information of the potential hazards associated with materials used or stored in their work area. A SDS also advises employees on the appropriate way to handle hazardous chemicals, what PPE is required for handling the chemical, how to properly store the chemical, information on handling spill cleanup, first aid, etc. Per the revised 2012 HCS, all SDS must have a standardized format organized into the following 16 sections:

Section 1: Identification

Section 2: Hazard(s) Identification

Section 3: Composition/Information on Ingredients

Section 4: First-aid Measures

Section 5: Fire-Fighting Measures

Section 6: Accidental Release Measures

Section 7: Handling and Storage

Section 8: Exposure Controls/Personal Protection

Section 9: Physical and Chemical Properties

Section 10: Stability and Reactivity

Section 11: Toxicological Information

Section 12: Ecological Information

Section 13: Disposal Considerations

Section 14: Transport Information

Section 15: Regulatory Information

Section 16: Other Information, including date of preparation or last revision

Refer to Appendix C for a complete description of each section.

A SDS must always be readily available to employees. URI uses OnSite Systems, a cloud based on-line chemical management system to maintain a database of SDSs of all chemicals. OnSite Systems SDS access link can be accessed from URI's <u>Microsoft 365 portal</u>. Once there, you can use your single sign on (SSO) username and password, then type in "safety data sheets" in the search bar to access the app. Detailed instructions on access and use is included in Appendix F of this document. SDSs shall be reviewed by all personnel who will be using hazardous chemicals before the chemical is used in the workplace. Supervisors or their designee are required to review how to access SDSs through URI's Microsoft portal with each employee, or contact EH&S at <u>srm@etal.uri.edu</u> for training assistance or questions.

A safety data sheet must be developed and sent with those products that are synthesized at URI and distributed outside of the University proper in accordance with OSHA's Hazard Communication Standard. If products contain hazardous chemicals in concentrations greater than one percent (or 0.1% for carcinogens), it is the responsibility of the party synthesizing the product to develop and distribute the SDS.

#### 6. Employee Training and Information

Employers must provide employees with effective information and training on hazardous chemicals that are located in their work area at the time of their initial assignment and whenever a new physical or health hazard is introduced into the work area.

Employees must be informed of:

- 1. The requirements of the Hazard Communication Standard (29CFR 1910.1200).
- 2. The location and availability of the written Hazard Communication Plan.
- 3. Physical and health hazards of chemicals in the work area and their locations.
- 4. Location of the hazardous chemicals inventory and the SDSs for all hazardous chemicals in their work area.
- 5. Methods and observation techniques used to detect the presence or release of a hazardous chemical.
- 6. How to lessen or prevent exposure to these hazardous chemicals through usage of engineered controls (such as ventilation), work practices, and personal protective equipment (PPE).
- 7. How to use the information provided on SDSs.
- 8. How to read and understand labels.
- 9. Contingency plans for medical and accident response.
- 10. The proper use, maintenance, and storage of any PPE required.
- 11. Procedures implemented to provide employee information about chemical hazards for non-routine or special tasks.

URI EH&S provides this training for all employees that may be exposed to hazardous chemicals. Refer to URI's Environmental Health and Safety web page to register for the next available Hazard Communication Training.

#### **Hazard Determination**

There are various types of chemical hazards, for classification purposes the various types are defined as Physical Hazards, Health Hazards, Simple Asphyxiant, Combustible Dust, and Pyrophoric Gas. By completing an inventory listing these chemicals and reviewing SDSs, these chemicals can be identified.

<u>Physical Hazard</u> - A physical hazard is defined as a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, 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. There are 16 physical hazard classes and their associated hazard categories, which can be located in Appendix B to 29CFR 1910.1200 – Physical Criteria.

<u>Health Hazard</u> - A health hazard is defined as 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. There are 10 health hazard classes and their associated hazard categories defined in Appendix A to 29CFR 1910.1200 - Health Hazard Criteria.

<u>Simple Asphyxiant</u> - A simple asphyxiant means a substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

<u>Combustible Dust</u> - OSHA does not define "combustible dust" in the 2012 HCS; however, the definition can be inferred from other OSHA publications and emphasis programs regarding combustible dusts. A combustible dust may be defined as a combustible particulate solid that presents a fire or deflagration hazard when suspended in air or some other oxidizing medium over a range of concentrations, regardless of particle size or shape.

<u>Pyrophoric Gas</u> - A pyrophoric gas is defined as a chemical in a gaseous that will ignite spontaneously in air at a temperature of 130°F (54.4°C) or below.

#### 7. Personal Protective Equipment

Personal protective equipment (PPE) includes gloves, safety glasses, goggles, face shields, aprons, respirators, etc. The PPE necessary for protection while being exposed to hazardous chemicals, flying particles, damaging light sources, etc. must be made available to employees for their use. Proper use of protective equipment is essential to prevent exposure. Supervisors must instruct employees as to what personal protective equipment must be worn. This equipment must be kept clean and stored in such a manner that it is protected from contaminants, dirt, dust or any atmosphere that might cause damage or deterioration of the equipment. Protective clothing should always be free from holes, rips, or tears.

• Gloves should be selected based on the chemicals being handled, or the task being performed.

- Eye protection, safety glasses or goggles, must meet ANSI (American National Standards Institute) Z87.1 standards.
- Safety goggles should always be worn whenever a potential chemical splash hazard or flying particle hazard exists (a face shield might also be required for certain activities).
- They must fit well, be reasonably comfortable, and not interfere with vision.
- If an employee wears prescription lenses, safety glasses or goggles must be worn over prescription glasses whenever eye protection is required unless the prescription glasses are approved safety glasses (ANSI Z87.1).
- Safety glasses must always have side shields.
- Departments may choose to cover all or part of the purchase price of prescription safety glasses.
- If the use of respirators is required for specific tasks, employees must be enrolled in the University Respiratory Protection Program. This covers all type of respiratory protection equipment, including dust/mist (N95 or P95) type respirators. Contact Environmental Health & Safety for information on the Respiratory Protection Program.
- No employee is allowed to wear a respirator until approval is given by the employee's supervisor and EH&S.
- Chemically resistant coveralls or aprons should be used when needed and type/material selected according to materials being handled/contacted.

#### 8. Non-Routine Tasks

Employees performing "non-routine" tasks can be exposed to chemicals from unusual and unsuspected sources. These "non-routine" tasks may include, for example, periodic tank or boiler cleaning or the replacement of seals and gaskets. Written procedures shall be developed for every "non-routine" task by the supervisor of the employees who will perform the task. The information will include chemical hazards associated with the performance of the tasks and appropriate protective measures required to perform the task safely. The procedures shall be included (or specific location referenced) in the local copy of the Hazard Communication Plan.

#### 9. Spills and Fires

In the event of a spill, contact URI Emergency dispatch at 4-4910 (from any campus phone) or 874-4910. This phone number may be called 24/7 for assistance. Dispatch will then contact the EH&S staff person on call. In the event of a fire or life threatening injury or emergency, call 911. For general questions or non-emergency issues, contact EH&S at <u>srm@etal.uri.edu</u> and a EH&S staff person will respond within 24 hours.

#### Appendices

#### Appendix A– GHS Pictogram Reference Chart



1

#### Appendix B– Sample GHS Label

CODE 1.) Product Identifier	2.) Pictogram
Keep container tightly closed. Store in a cool, well-ventilated place that is locked. Keep away from heat/sparks/open flame. No smoking. Only use non-sparking tools.	
Take precautionary measures against static discharge.	DANGER
Do not breathe vapors. Wear protective gloves. Do not eat, drink or smoke when using this production the statements of	3.) Signal Word Highly flammable liquid and vapor.
In Case of Fire: use dry chemical (BC) or Carbon Dioxide (CO <sub>2</sub> ) fire extinguisher to extinguish.	May cause liver and kidney damage
<b>First Aid</b> If exposed call Poison Center. If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.	Supplemental Information
Company Name	2012
Street Address 5.) Supplier Identification CityState Postal CodeCountry Emergency Phone Number	Fill weight: Lot Number: 6700000000000000000000000000000000

#### Appendix C – Safety Data Sheet Sections

## Hazard Communication Safety Data Sheets

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

Section 2, Hazard(s) identification includes all hazards regarding the chemical; required label elements.

Section 3, Composition/information on ingredients includes information on chemical ingredients; trade secret claims.

Section 4, First-aid measures includes important symptoms/effects, acute, delayed; required treatment.

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

Section 6, Accidental release measures lists emergency procedures; protective equipment; proper methods of containment and cleanup.

**Section 7, Handling and storage** lists precautions for safe handling and storage, including incompatibilities.

#### Section 8, Exposure controls/personal protection

lists OSHA's Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs); appropriate engineering controls; personal protective equipment (PPE).

Section 9, Physical and chemical properties lists the chemical's characteristics.

Section 10, Stability and reactivity lists chemical stability and possibility of hazardous reactions.

Section 11, Toxicological information includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

Section 12, Ecological information\* Section 13, Disposal considerations\* Section 14, Transport information\* Section 15, Regulatory information\*

Section 16, Other information, includes the date of preparation or last revision.

\*Note: Since other Agencies regulate this information, OSHA will not be enforcing Sections 12 through 15 (29 CFR 1910.1200(g)(2)).

#### <u> Appendix D – Sample NFPA Label</u>



#### Appendix E– Sample HMIS Label



#### Appendix F– How to Access and Use OnSite Systems SDS Finder

#### How to access safety data sheets

Note that you must have a URI single sign on (SSO) to access the link for SDSs.

- 1. Go to your URI Microsoft 365 portal. Here is the link: <u>https://myaccount.microsoft.com/</u>
- 2. Log in using your email and SSO
- 3. Click on "All apps  $\rightarrow$ "

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Apps								Get more Apps
Copilot	<b>Ti</b> eams	Word	<b>X</b> Excel	PowerPoint	OneDrive			$\frown$
Use across Teams, Outlook, and I	Microsoft 365							All apps $\rightarrow$
Power BI for Microsoft Teams	S,							

- 4. You may need to scroll to the very bottom and click on "Show all"
- 5. Click on the icon that says "Safety Data Sheets"



6. Your screen will look like this.

EHSA Other /	SDS Hub Search Edit Labels							<b>9</b> H	elp 👻
Search: Chem	nical Description / Synonyms 🔹	Contains •	Q Find					Not finding your SDS	3 <b>O</b>
	Chemical Description	/			CAS #	Vendor	Catalog #	Revision Date	
				T	T	<b>T</b>	<b>T</b>		
									^

7. Type in your chemical in the top search box. You can then filter by vendor. When you have the one you need, click on "View SDS" to view or print your copy.

EHSA C	ner / SDS Hub Search Edit Labes					🛛 Help
Search: Chemical Description / Synonyms v Contains v azthromycin Q Find						
	Chemical Description 🕴	CAS #	Vendor	Catalog #	Revision Date	
		T	T	T		
🔶 View :	Azithromycin Powder for Oral Suspension	117772-70-0	Greenstone LLC	PZ00291	09-25-2014	12
🔷 🗞 View :	Azithromycin Pharmaceutical Secondary Standard; Certified Reference Material	117772-70-0	SIGMA	PHR1088-1G		1
🔶 View :	Azithromycin dihydrate >=98% (HPLC)	117772-70-0	SIGMA	PZ0007		-
View :	Azithromycin analytical standard	83905-01-5	SIGMA	75199		12
View :	Azithromycin analytical standard	83905-01-5	SIGMA	75199-25MG-F		<b>I</b> *
View :	AZITHROMYCIN	117772-70-0	ALDRICH	1046056		
🔶 View S	Azithromycin		FISHER	50-136-1687		1
View :	Azithromycin		FISHER	50-202-9241		<b>I</b> *
View :	Azithromycin	117772-70-0	GRAINGER	26XM18		1

EH&S offers training on how to access and find the correct SDS. Please email EH&S at: <a href="mailto:srm@etal.uri.edu">srm@etal.uri.edu</a> with questions or to request a training.