



Environmental Health & Safety Ordering, Delivery, and Inventory of Hazardous Materials

1. Purpose and Applicability

- 1.1. This document provides the Buyways procedures required for the ordering and receipt of hazardous materials and other substances tracked through the CEMS (*Chemical Environmental Management System*) inventory database. Procards cannot be used to purchase hazardous materials. Hazardous materials should be handled by trained personnel. See figure 1 for a list of hazardous materials requiring bar coding and entry into CEMS inventory. Safety and emergency response requirements mandate that inventoried materials be correctly entered into the CEMS database, including storage areas, hazard classification and the responsible owner. (This information also helps to maintain regulatory compliance to the US EPA's Emergency Planning and Community Right to Know Act, 40 CFR Part 355 and OSHA's Hazard Communication Regulations 29 CFR 1910.1200).
- 1.2. All hazardous materials as described in column 1 of "*Figure 1: CEMS Inventoried Substance List*" shall be shipped to the Main Receiving.
- 1.3. Other hazardous materials as described in columns 2 and 3 of "*figure 1: CEMS Inventoried Substance List*" may be shipped directly to the laboratory.

Note, that hazardous materials must be transported in State vehicles only.

2. Definitions

- 2.1. **Carrier** – Transports materials from a vendor to the University (e.g. UPS, FedEx, DHL)
- 2.2. **CEMS** – Web-based Inventory Database located at:
<https://cems.unh.edu/umassd/CEMS/Dashboard>
- 2.3. **Hazardous Materials**- are products, articles or substances that are capable of posing a significant risk to health, safety or property.
- 2.4. **Laboratory** – Any room operated by the University of Massachusetts that will store hazardous materials and/or non-hazardous CEMS inventoried substances. Examples include the traditional science laboratories as well as art studios, film developing rooms, theater set design rooms, etc.
- 2.5. **Nonhazardous Materials** – Salts, buffers and any other materials of a non-hazardous nature (see figure 3 for examples).
- 2.6. **Environmental Health & Safety** – Responsible for oversight and audit of the chemical inventory program, CEMS.
- 2.7. **Ordering Personnel** – The individual that places the order via Purchase Order.
- 2.8. **Responsible Owner** – The individual ultimately responsible for the hazardous material.

2.9. **Storage Location** – The building and room number where the hazardous material will be stored.

2.10. **Vendor** – The company selling or distributing hazardous material.

2.11. **Main Receiving** – University Receiving managed by the Administrative Services Department.

Figure 1: CEMS Inventoried Substance List

Shipped to Main Receiving and CEMS Inventoried by Responsible Owner	Shipped to Laboratory and CEMS Inventoried by Responsible Owner	Shipped to Laboratory, NOT Inventoried into CEMS
<p>Flammable/Combustible Liquids (e.g. alcohols, solvents, lubricants, paint thinner, aerosols, paint)</p> <p>Flammable Solids (e.g. magnesium, sodium, organo metallics)</p> <p>Oxidizers (e.g. concentrated mineral acids, bromates, chlorates, permanganates)</p> <p>Organic Peroxides - (e.g., hydrogen peroxide >8%, benzoyl peroxide)</p> <p>Poisons – not included in the above categories (i.e. biological toxins, dyes, glazes, paints, adhesives, and specimen solutions)</p> <p>Corrosives – (e.g. acids or bases which are corrosive to the skin and other materials having a pH less than 5.5 or greater than 11.0)</p>	<p>Compressed Gases – including liquefied gases</p> <p>Hazardous Retail Items bought directly from a store – used as an integral part of the function of the laboratory (e.g. paint thinners, paints, ceramic glazes)</p>	<p>Retail Products – used for routine household-like activities (e.g. cleansers, dish soap)</p> <p>Materials expended within 1 to 2 days – working solutions</p> <p>Molecular Biological Reagents and Enzyme preparations</p> <p>Biological Materials to include biohazardous materials – (e.g. plant or animal tissue, reproducing biological organisms, bacteria, viruses, fungi, and yeast)</p> <p>Materials stored and shipped on dry ice</p> <p>Containers of Hazardous Materials less than 10 grams</p> <p>Non-hazardous Chemicals</p>

3. Roles and Responsibilities

- 3.1 **Ordering Personnel** – Must enter into Buyways the appropriate information for the proper ordering, shipment, and final storage location. The Ordering Personnel will include the weight and/or volume and hazard classification of the hazardous material in the Comment Panel, the Responsible Owner (PI), Storage Location (building and room number), and Researcher.
- 3.2 **Responsible Owner** – Responsible for the receipt of the hazardous material into the laboratory, barcoding the container(s) and entering required data into CEMS (see Figure 2 for required data).

4. Procedures

4.1. Hazardous Materials Shipped to Main Receiving

- 4.1.1. Order hazardous materials including all CEMS inventoried substances through Buyways.
- 4.1.2. In exceptional cases a Procard may be used for a purchase if the purchaser notifies EH&S staff 24 hours prior to placing order and obtains EH&S approval.
- 4.1.3. Only CEMS inventoried hazardous materials shall be placed on this order. Other laboratory supplies must be placed on a different order and should be delivered directly to the using department via Distribution Services.
- 4.1.4. When entering the hazardous material into Buyways, it is necessary that you designate the necessary commodity code – Chemicals/Gases/Demurrage and Cylinder Lease.
- 4.1.5. Direct the vendor to ship to the following address:
University of Massachusetts
285 Old Westport Rd
North Dartmouth, MA 02747-2300
ATTN: Responsible Owner (PI), Storage Location, Researcher
- 4.1.6. Confirm that the storage location includes the **building and room number** in address.
- 4.1.7. Add the **quantity** of the chemical in the comments box.
- 4.1.8. In some cases, the responsible owner may wish the CEMS inventoried substance be delivered to a destination other than the final storage location. Please list this destination in the “Justification/Comments” box in Buyways.
- 4.1.9. Campus shipping and receiving will deliver the package containing the hazardous material to the laboratory. The responsible owner must immediately inventory (24 hours) into CEMS.
- 4.1.10. Responsible owners must open the shipping package in a fume hood, ensuring that container(s) of hazardous material is intact and undamaged.
- 4.1.11. The responsible owner must place the correct barcode on the chemical container.
- 4.1.12. Log into CEMS and enter the required information based on Figure 2.

4.1.13. Store the hazardous materials in a proper location, considering security, temperature and surrounding chemicals.

4.2. Hazardous Materials Shipped Directly to the Departments

4.2.1. Order the hazardous material via normal Purchase Order.

4.2.2. Other laboratory supplies may be placed on the same order.

4.2.3. The “Ship To” address will list the preferred destination of the responsible owner, however a person trained in the receipt of hazardous materials should accept the package.

Figure 2. Required Information in CEMS	
<ul style="list-style-type: none">• Chemical Name• Manufacturer• Product Number• Safety Data Sheet• Hazard Classification• Hazard Type• NFPA• CAS #	<ul style="list-style-type: none">• Barcode• Owner Location• Container Quantity<ul style="list-style-type: none">○ Amount○ Unit• Container Type• Storage Type

4.3. Training and Compliance for Reporting of Hazardous Materials

4.3.1. Mandatory use of chemical descriptions in the body of the purchase order to clearly identify the chemicals.

4.3.2. Mandatory use of account code 739630 – Chemicals to be used for reporting

4.3.3. A Procard shall not be used to acquire hazardous material(s). Use of the Procard to purchase chemicals will result in deactivation of the card.

4.3.4. Non-compliance to accurately use descriptions and account codes in Buyways will warrant additional training for first offence. If a second offence occurs, chemical purchases will not be approved by EH&S.

4.4. Application of Surcharge to Hazardous Chemicals

4.4.1. A surcharge will be applied to the purchase of hazardous chemicals

4.4.2. The surcharge will be 23% and automatically applied thru thru PeopleSoft

4.4.3. The money collected thru the application shall be applied to the cost for disposal of hazardous waste.

4.4.4. Should the hazardous chemical consist of small quantities of chemicals in test kits and the cost of those test kits be in excess of \$500, the Owner will be refunded all but 2.3% of that cost.

Figure 3. Nonhazardous Materials	
<ul style="list-style-type: none">• Sodium Chloride• Citric Acid Trisodium Salt Dihydrate• L-Ascorbic Acid Sodium Salt	<ul style="list-style-type: none">• Acetate Buffer• Phosphate Buffered Saline• Tris EDTA Bu