

**Handling Corrosives**

**Standard Operating Procedure**

Name:

Date:

Revision Number:

Date of Revision:

**\*Attach description of process that involves the use of corrosives.\***

**1.0 Hazards Associated with Corrosives:**

\*List each corrosive chemical here and fill in the information from the safety data sheet regarding the hazards of each chemical.

**2.0 Controls:**

**2.1 Engineering Controls:**

* Identify and use a less hazardous chemical. (Before purchasing, do research into possible substitutes for hydrofluoric acid.)
* Utilize a fume hood.

**2.2 Administrative Controls:**

* Do not work alone in the lab. Implement the buddy system.
* Attend baseline laboratory safety training (required annually). Online lab safety training is located at the following link -[Online Lab Safety Training](https://www.uml.edu/EEM/EHS/ehs-training/) .
* Attend laboratory-specific training on handling corrosives.
  + Document this training in section 8 of the Chemical Hygiene Plan Notebook.
* Know the location of the emergency shower and eyewash station.
* Review this SOP and applicable safety data sheets as part of your laboratory-specific training on handling corrosives.
* Keep a hard copy of the safety data sheet (SDS) for each corrosive used in the lab in section 6 of the CHP Notebook.
* Label areas that contain corrosives so that the hazard is evident.
* Purchase only enough material needed to complete an experiment.
* Wash hands thoroughly with soap and water after removing gloves.

**2.3 Personal Protective Equipment:**

* Safety glasses
* Safety goggles if splash hazard to the eyes
* Face shield if splash hazard to the face
* Laboratory coat
* (Refer to a glove compatibility chart and/or contact Kathi Lamond, CIH, at extension 42746.)
  + NOTE: Gloves must be selected on the basis of their chemical resistance to the material(s) being handled, their suitability for the procedures being conducted as well as temperature extremes. Improper selection may result in permeation of the chemical through the glove and possible personal exposure to the chemical.
* Closed toe shoes and pants

**3.0 Precautions:**

* (\*Fill in specific information from the safety data sheet for corrosive materials.)

**4.0 Storage:**

* Store in a cool, dry, well-ventilated area in tightly sealed containers that are properly labeled.
* Metal containers are not compatible with corrosive liquids.
* Store in a separate location away from incompatible materials.
* All cabinets containing corrosives should be clearly marked with a “corrosives” label.
* Recommend storing all corrosive liquids in secondary containment such as a polyethylene spill tray.

**5.0 Disposal:**

Place the UMass Lowell Hazardous Waste Label on the container and fill out the label. (Do not use metal containers.) Full and/or dated containers of hazardous waste are picked up by EHS during the weekly inspection checks for satellite accumulation areas or upon request by calling 42543. Remember, the container must be picked up within 3 days after the container is full or dated. Please call extension 42543 for a pick-up if your full and/or dated container of hazardous waste is generated.

**6.0 Emergency Procedures:**

**6.1 Spills**

**For spills that occur inside of a fume hood (< 1 liter)**

* If lab group has received proper training and a proper spill kit is available, the spill may be cleaned up by the lab group.
* If the lab group has not received proper training and a spill kit is not available or greater than 1 liter of corrosive liquid has spilled, please call 44911.

*Examples of proper spill kits are powdered calcium carbonate, calcium hydroxide, caustic soda, and Spill-X-C caustic neutralizer.*

**For spills that occur outside of a fume hood**

* Evacuate the lab, post a restriction on the lab door and call UMass Lowell Police at extension 44911.
* Stay close by to answer questions when EHS and emergency response personnel arrive.

**6.2 First Aid**

For eyes

* Irrigate the eyes for 15 minutes, holding eyelids apart.
* Buddy must call extension 44911 to seek medical assistance and then can keep track of the length of time eyes are being irrigated.
* Give SDS for corrosive material to medical personnel when they arrive on scene.

For skin

* For full body exposure, remove contaminated clothing and go under the emergency shower for 15 minutes. If bare hands and/or arms are contaminated, rinse area with water for 15 minutes. Remove clothing and rinse contaminated area for 15 minutes.
* Buddy must call extension 44911 immediately to seek medical assistance.
* Give SDS for corrosive liquid to medical personnel when they arrive on scene.

For inhalation

* Remove to fresh air. Seek medical attention immediately (call extension 44911). NOTE: Even small amounts of vapor can cause irreversible damage to the mucous membranes.
* Give SDS for corrosive liquid to medical personnel when they arrive on scene.

**6.3 Fire:**

* Evacuate the lab, pull the nearest fire alarm pull station and then go to a safe area and call extension 44911. Follow the fire safety evacuation plan.

**NOTE:** All work-related injuries must be reported immediately to Human Resources (HR) by calling extension 43560. An Incident/Injury Report Form must be filled out and faxed to EEM-EHS at 934-4018. [The Incident/Injury Report Form is available on-line at [Incident/Injury Report Form](http://www.uml.edu/ehs). Please double click on the link at the end of this web page entitled [UMass Lowell Emergency Accident / Incident Report Form (PDF).]](http://www.uml.edu/ehs/Documents/UMass_Lowell_Emergency_Accident-%20Incident_%20Report_%20Form.pdf) The original Incident/Injury Report Form must be turned in to HR.

*\*The buddy, supervisor, or Principal Investigator may fill out the Incident/Injury Report Form while the injured employee follows first aid procedures and seeks medical attention.*