


<p><b>Carnegie Mellon University</b>  Environmental Health &amp; Safety  FIRE   LAB   WORK </p>	<p><b>Environmental Health and Safety</b>  <b>Hydrofluoric Acid Spill and Splash Guidelines and Procedures</b></p>
<p><b>Date of Issuance:</b></p>	<p><b>Revision Date:</b> 7/1/2022</p>
<p><b>Revision Number:</b> 2</p>	<p><b>Prepared by:</b> EHS</p>

## 1. Spill Clean Up Procedures

### Please Follow the Following Basic Spill Procedures

- Alert others in the area.
- Contain the spill if it is safe to do so.
- Leave the laboratory and contact EHS (8-5609) and specify that you have a hydrofluoric acid spill. Stay by the laboratory (if safe to do so) to provide information and support.
- EHS is responsible for the cleanup of all hydrofluoric acid spills.

## 2. Accident Prevention

- Everyone who handles or works around hydrofluoric acid must be aware of its properties and dangers
- Everyone who handle or works around hydrofluoric acid must receive initial safety training. The training covers proper safe handling procedures, safety precautions and the specifics of the University's program.
- All engineering control must be in place and properly operating.
- Users of hydrofluoric acid must wear the proper personal protective equipment - Proper Lab Attire, Lab Coat, Splash Goggle and Stanzoil Neoprene/Nitrile Gloves. Face Shields and Splash Aprons are recommended.
- No one is to work alone with Hydrofluoric Acid. A trained buddy or user must be present in the laboratory.
- No one is to work with Hydrofluoric Acid before 8:00 a.m. or after 5:00 p.m. or on weekends.
- Uses must inspect their Spill/Exposure Kit prior to working with the material. Users are responsible for assuring that the kit is stocked.



**HYDROFLUORIC ACID  
HAZARDOUS LIQUID**

Causes SEVERE BURNS which may not be IMMEDIATELY PAINFUL or VISIBLE.

**AVOID CONTACT WITH EYES,  
SKIN AND CLOTHING!!**

Use 2.5% Calcium Gluconate Gel IMMEDIATELY on burn TO REDUCE SKIN and BONE DAMAGE.



Emergency Contact Information:  
University Police: 8-2323  
Environmental, Health and Safety: 8-8182

### **3. General Procedures for All Exposures**

- a. Activate the Buddy System Response Immediately.
- b. The buddy must assist the victim to the safety shower/eye wash and get the spill/exposure kit.
- c. The buddy must call CMU Police 8-2323.
- d. Let the dispatcher know you have a Hydrofluoric Acid exposure. Give the exact location, building name and room number.

### **4. Procedure for Liquid and Vapor Exposure to the Skin**

- a. The victim (or buddy) must activate the safety shower (or sink faucet for small local exposures).
  - i. Decontaminate under the safety shower for 5 minutes.
  - ii. Victim should remove all contaminated items (i.e. clothing, shoes and jewelry while under the shower).
  - iii. Remove goggles last - look up into the water and pull over the head.
- b. Victim should self-administer the calcium gluconate:
  - i. If the Victim is unable to administer, the buddy can assist using the neoprene gloves from the kit.
  - ii. NOTE THE TIME OF INITIAL APPLICATION.
  - iii. Reapply the gel every 20 minutes.
- c. The victim should ingest 6 Calcium Carbonate tablets only if conscious.
- d. The Buddy should bag all contaminated clothing and supplies using the proper personal protective equipment.
- e. Inform Emergency Medical Personnel that Calcium Gluconate have been administered and provide the SDS and Medical Treatment Guidelines.

### **5. Procedure for Liquid and Vapor Exposure to the Eyes**

- a. The victim (or buddy) must activate the eye wash.
  - i. Decontaminate in the eye wash for 15 minutes — holding the both eye lids (upper and lower) open for irrigation.
- b. The victim should ingest 6 Calcium Carbonate tablets (TUMS) only if the victim is conscious.
- c. Victim should self-administer the calcium gluconate to exposed areas of the face:
  - i. If the Victim is unable to administer, the buddy can assist, using the neoprene gloves from the kit
  - ii. NOTE THE TIME OF INITIAL APPLICATION
  - iii. Reapply the gel every 20 minutes
- d. Inform Emergency Medical Personnel that Calcium Gluconate have been administered and provide SDS & Medical Treatment Guidelines.

### **6. Procedure for Inhalation Exposure**

- a. The buddy should immediately remove the victim to clean air — ONLY IF IT IS SAFE TO DO SO.

- b. The victim (or buddy) must activate the eye wash or safety shower, depending on where the vapor exposure occurred.
- c. Follow the appropriate decontamination procedure above
- d. The victim should ingest 6 Calcium Carbonate tablets only if the victim is conscious.
- e. Inform Emergency Medical Personnel that Calcium Gluconate has been administered and provide SDS & Medical Treatment Guidelines.
- f. EHS is responsible for the cleanup of all hydrofluoric acid spills.

## 7. Hydrofluoric acid Spill/Splash Kit

Labs should contact Environmental Health and safety to obtain a Hydrofluoric acid Spill/Splash Kit. The kit will have:

- a. Calcium Gluconate tube
- b. Calcium Carbonate Tablets
- c. 22 mil Stanzoil Neoprene/Nitrile Gloves
- d. Protective Goggles
- e. Polyethylene Waste Bag
- f. Chemical Waste Labels
- g. Copy of Hydrofluoric Acid SOP
- h. Copy of the Honeywell Medical Treatment Guide
- i. Spill Material Specific for Hydrofluoric Acid Spill
- j. SDS for Hydrofluoric Acid

## 8. Revisions

Date	Documented Changes	Initials
6/3/2021	Updated Format and Accessibility Update	MAS
7/1/2022	Minor content updates	MAS