

University of Delaware

Department of Environmental Health & Safety

Hydrofluoric Acid Spill and Splash Guidelines and Procedures



EMERGENCY CONTACT INFORMATION:

Police/Fire/Ambulance:

911

Environmental Health & Safety:

831-8475

September 2014

General Procedures for All Exposures

Activate the Buddy System Response Immediately:

1. The buddy must assist the victim to the safety shower/eye wash and get the spill/exposure kit
2. The buddy must call **911**
3. Let the dispatcher know you have a Hydrofluoric Acid exposure. Give the exact location, building name and room number. Tell them that the victim is being decontaminated and instruct them to send an ambulance.

Procedure for Liquid and Vapor Exposure to the Skin

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

Procedure for Liquid and Vapor Exposure to the Eyes

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

Procedure for Inhalation Exposure

1. The buddy should immediately remove the victim to clean air – **ONLY IF IT IS SAFE TO DO SO**
2. The victim (or buddy) must activate the eye wash or safety shower, depending on where the vapor exposure occurred.
 - ◆ Follow the appropriate decontamination procedure above
3. The victim should ingest 6 Calcium Carbonate tablets (TUMS) only if the victim is conscious
4. Inform Emergency Medical Personnel that Calcium Carbonate and Calcium Gluconate have been administered and provide the MSDS and Medical Treatment Guidelines

Spill Clean Up Procedures

Please Follow the Following Basic Spill Procedures

1. Alert others in the area
2. Contain the spill if safe to do so
3. Cordon off the area
4. Leave the laboratory and contact 911 or DEHS and specify that you have a hydrofluoric acid spill. Stay by the laboratory (if safe to do so) to provide information and support
5. DEHS is responsible for the clean up of all hydrofluoric acid spills

Accident Prevention

1. Everyone who handles or works around hydrofluoric acid must be aware of its properties and dangers
2. Everyone who handle or works around hydrofluoric acid must receive initial and annual refresher training. The training covers proper safe handling procedures, safety precautions and the specifics of the University's program.
3. All engineering control must be in place and properly operating.
4. Everyone who use 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.
5. No one is to work alone with Hydrofluoric Acid. A trained buddy or user must be present in the laboratory.
6. No one is to work with Hydrofluoric Acid before 8:00 am or after 5:00 pm or on week-ends.
7. 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 Spill/Splash Kit Contents

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| 1. One Tube of Calcium Gluconate | 6. One Copy of the Hydrofluoric Acid Standard Operating Procedures |
| 2. One Roll of Calcium Carbonate (TUMS) Tablets | 7. One Copy of the Honeywell Medical Treatment Guide |
| 3. Two Pairs of 22 mil Stanzoil Neoprene/Nitrile Gloves | 8. One Pair of tongs |
| 4. One Heavy Duty Polyethylene Bag | 9. Spill Material Specific for Hydrofluoric Acid Spill |
| 5. One Chemical Waste Label | 10. One Copy of a MSDS for Hydrofluoric Acid |