

Emergency Procedures

Department of Materials Science & Engineering

University Police Department (352) 392-1111



Fire

In case of a fire emergency, remain calm and remember **R A C E**

R ESCUE PEOPLE	Without entering a hazardous situation or area, rescue and remove all individuals from the area.
A LARM	Activate alarms/alert occupants in the building Call 352-392-1111
C ONFINE	Close all doors and windows, if safe to do so All access must then be restricted to emergency response personnel only
E VACUATE	Evacuate the area to allow the emergency response personnel to fight the fire Report to the assigned rally point for a head count

OR

EXTINGUISH Attempt to extinguish the fire only if all of the following criteria have been met:

1. Both the 9-911 response and building alarm have been activated.
2. Training has been received on how to use a fire extinguisher.
3. The proper extinguisher is available.
4. The fire has not spread from its point of origin.
5. The fire is still small enough to be handled by the available fire extinguisher.
6. The fire can be fought with your back to the exit to ensure there is a means of escape in the event that the attempt to extinguish the fire fails.
7. If the fire is not extinguished after using one fire extinguisher, close all doors and leave the building.

If clothing is on fire, help the individual to the floor and roll him/her around to smother the flames. If a safety shower is immediately available, douse the person with water to cool the skin. Seek immediate medical attention.

Medical Emergency

IMMEDIATELY CALL 9-911 IN THE EVENT OF A SUSPECTED CARDIAC ARREST OR THE NEED FOR URGENT MEDICAL ASSISTANCE/FIRST AID

REMAIN CALM Do not panic

ASSESS
PATIENT

Danger- to you and patient

Response- of patient

Airway- is it clear and unobstructed

Breathing- is their chest rising

Circulation- do they have a pulse

Defibrillation- if necessary and a defibrillator (AED) is available, use it and follow its prompts

RAISE ALARM

Call for help of any staff or students in the area

Call 9-911 and respond to questions asked by emergency personnel (see next page for questions you may be asked)

COMMENCE

Cardio pulmonary resuscitation (CPR) or first aid as required if trained

REFER

Protocols for emergencies located in UF Emergency Procedures

Note: Never leave patient alone. Do not move patient unless exposed to a life threatening situation. Provide support and appropriate assistance until emergency help arrives.

Medical Emergency

RAISING THE ALARM

HELP US HELP YOU

CALL 9-911 & GIVE THE OPERATOR:

1. YOUR LOCATION

- BUILDING NAME, FLOOR NUMBER & ROOM NUMBER
OR

-NEAREST CROSS STREET OR THE NEAREST BUILDING AND
YOUR PROXIMITY TO IT

2. YOUR CONTACT NUMBER

(EXTENSION OR MOBILE)

3. THE MEDICAL PROBLEM

DESCRIPTION OF COMPLAINT

(SHORT OF BREATH/SWEATING/WHERE &WHAT TYPE OF PAIN)

4. AGE OF THE PERSON

(APPROXIMATE AGE IF NOT SURE)

5. IS THE PERSON CONSCIOUS? (YES OR NO)

6. IS THE PERSON BREATHING? (YES OR NO)

**** When the responder arrives have someone meet him at the sidewalk and escort him to the location of the emergency, also have someone hold the elevator if possible.**

Evacuation

Laboratory members should evacuate the building immediately when the building alarm goes off.

General Evacuation Procedures

1. Stay calm, do not rush, and do not panic.
2. Safely stop your work. Shut down experiments and machinery if it is safe to do so.
3. If safe close your office/lab door and windows.
4. Use the nearest safe stairs, and proceed to the nearest safe exit. Do **not** use the elevator.
5. Proceed to the designated meeting area (fig 1), the designated area is located by the red steel sculpture (fig 2) in front of Rhines Hall and Weil Hall.
6. Wait for any instructions from emergency responders.
7. Do **not** re-enter the facility until you have been told to do so by emergency responders.
8. Contact any unaccounted group members - see contact sheet in insert

Evacuation Route and Meeting Point



Fig 1. General Evacuation route towards meeting point.



Fig 2. Meeting point

Evacuation

First Aid

First Aid

Provide on-site first aid treatment to stop bleeding, cool burns or in the event of chemical splash, by flushing with water at a safety shower or eyewash. Remove any jewelry in the affected area. If a delayed action of the chemical splash is possible (e.g. phenol, hydrofluoric acid, methyl and ethyl bromides) obtain medical attention promptly.

Chemical Splashes

1. Over a large area of the body - Immediately flood the exposed areas with water for at least 15 minutes; resume if pain returns. Quickly remove all contaminated clothing while under the safety shower. Wash off chemicals by using a mild detergent soap and water; do not use neutralizing chemicals or salves. Seek medical attention.
 2. On a confined area of the skin - Immediately flush with cold water for at least 15 minutes and wash by using a mild detergent or soap and water. Seek medical attention.
 3. Eyes -Immediately wash the eye and inner surface of the eyelid with copious amounts of water for 15 minutes. Check for and remove any contact lenses, if possible, without causing further injury. Hold the eye open to wash thoroughly behind the eyelids. Have injured worker move eye side-to-side and up and down during rinsing. Obtain medical attention immediately after rinsing.
 4. Hydrofluoric burns - the area should be rinsed immediately with running water for 2-5 minutes. A calcium gluconate compound must be applied to the area. Seek medical treatment immediately.
 5. Phenol burns - Phenol has the ability to penetrate the skin causing severe burns. It will anesthetize the area so little or no pain may be felt. In case of exposure, flush with water. Seek medical attention immediately. Substances such as polyethylene glycol may be used to neutralize and treat the burn in the hospital.
 6. Cryogen or dry ice burns (frostbite) - Flood or soak with tepid water-do not use hot water. Seek medical attention.
 7. Contaminated clothing should be disposed of.
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Ingestion of a Toxin. [Poison Control \(1-800-222-1222\)](tel:1-800-222-1222)

Dilute the poison by having the victim drink large amounts of water (do not give liquids to an unconscious or convulsing victim). Attempt to learn what the ingested substance was. Obtain medical treatment immediately. Save the label or container for transportation with the victim to the medical facility.

Inhalation of Chemical Fumes

Take the individual to fresh air, seek medical assistance immediately, and provide artificial respiration or CPR (if trained to do so safely) as needed.

First Aid

Reporting

Hazard Awareness

It is the responsibility of the PI and lab staff to strive for a safe working environment in their laboratory.

Observed hazards or potential hazards must be identified and corrected immediately.

All bottles and chemical containers must be labeled, including, flasks, beakers, etc. A reference list of the abbreviations must be posted in the lab.

Reporting

To report a laboratory accident, the PI needs to contact EHS (**392-1591**) and fill out an "Incident and Injury Investigation Report". If any employee were injured, Office of Human Resource should be also contacted (392-2447) and a "First Report of Injury or Illness" form may need to be completed. Once done, the report should be forwarded to the Workers' Compensation Office.

Exposure Monitoring

Personnel monitoring will be performed if there is reason to believe that the exposure level of any chemical may exceed 50% of the action level, the Ceiling level, or the Permissible Exposure Limit (PEL). Monitoring will be performed by EH&S staff or a designee approved by EH&S. Results of the monitoring will be discussed with the affected employee(s).

Follow-up Investigations

EH&S will perform follow-up investigations for all exposures and injuries. Staff will be interviewed to ascertain the circumstances involved with the incident.

Reporting

Chemical Spill

Laboratory members should clean up only small incidental spills that constitute a minimum hazard. Large chemical spills will be handled by EH&S. All lab staff should be aware of procedures to follow and precautions to take for the chemicals they are using.

Incidental Chemical Spills

1. Alert personnel in the immediate area.
 2. Avoid breathing vapors and try to determine what has spilled.
 3. Turn off ignition sources in the immediate area.
 4. If someone has been splashed with chemical see First Aid section.
 5. Wear protective equipment including safety goggles, disposable gloves, shoe covers, and a long-sleeve lab coat.
 6. Use a spill kit to pick-up materials. Confine the spill to small area by cleaning from the perimeter towards center.
 7. Place the used absorbent in a plastic bag or bucket and label it with a Hazardous Waste label.
 8. Clean area with water.
 9. For acids or base spills: Neutralizing may release hazardous fumes. If unsure, use an inert absorbent.
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Large Chemical Spill/Release call EH&S at 392-8400 or 392-1591

1. Avoid breathing vapors.
 2. Quickly identify the spilled material if it can be done safely.
 3. If the spill involves a flammable liquid, turn off all ignition sources, if it can be done safely.
 4. Immediately evacuate the area, closing all doors.
 5. If someone has been splashed with the chemical see First Aid section.
 6. Keep people away from the spill area until EH&S/Emergency personnel arrive to evaluate and control the situation. Place a sign at all doors to the spill location advising personnel **not** to enter the room.
 7. People knowledgeable about the spilled material should be available to provide information to EH&S/Emergency personnel.
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Emergency Procedures call UFPD at 352-392-1111 or 9-911

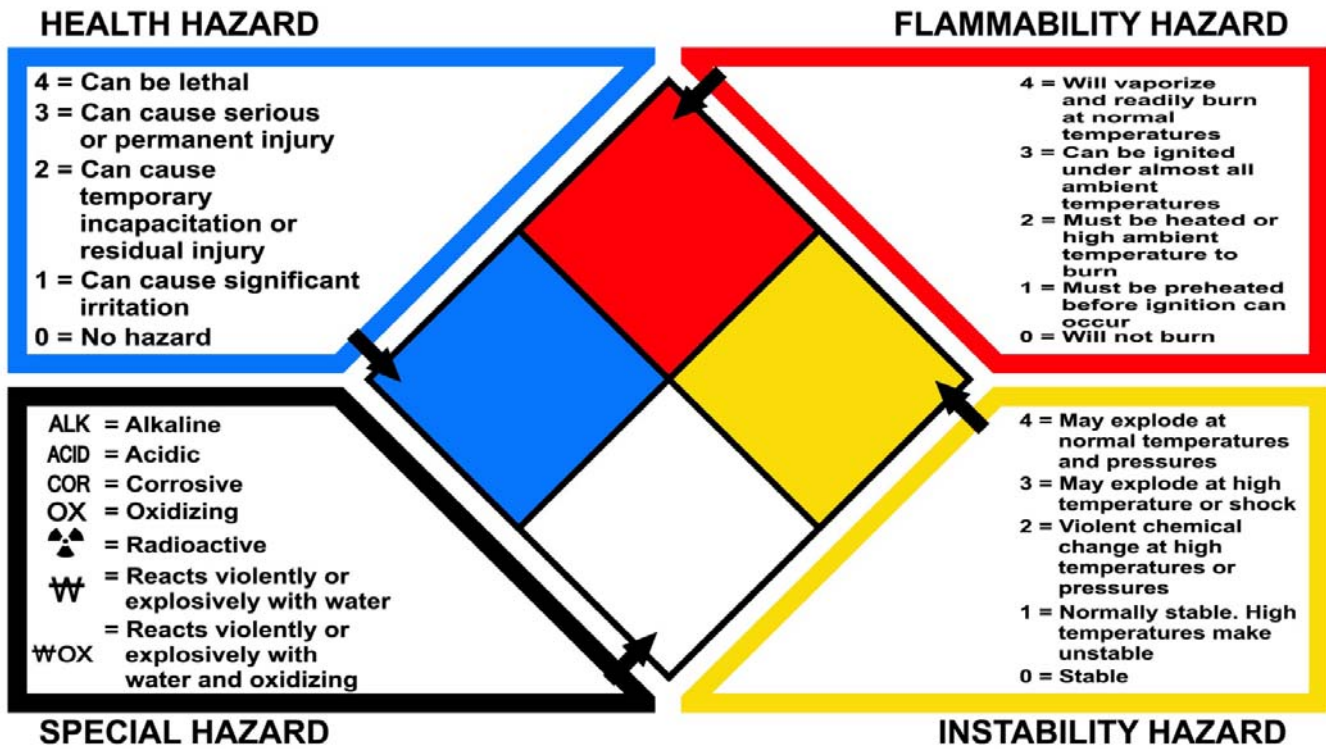
Immediately request emergency response assistance through the UFPD under any one of the following circumstances:

1. The release requires immediate attention because of imminent danger;
2. The release requires evacuation/control of employees beyond the immediate spill area;
3. The release poses a serious threat of fire or explosion;
4. The release may cause high levels of exposure to toxic substances that are uncontained;
5. The situation is unclear or important information is lacking.

Chemical Spill

Chemical Safety

NFPA Rating Explanation Guide



Chemical Safety

Internal Emergency

Other than fire/smoke, an internal emergency could be caused by explosion, electrical power failure, water supply failure, structural failure, spillage or leakage of hazardous substances, illegal occupancy, *etc.*

Building maintenance issues, Power/Water failure

- All hours, call emergency maintenance at **352-392-1121**
 - If there is an emergency such as persons trapped in elevator, call UFPD immediately at **352-392-1111** identify the building and elevator number.
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Illegal occupancy/intruders

- **Call UFPD** immediately at **352-392-1111**.
 - Get a description of the person's – sex, approximate age, height, build, hair color, complexion, clothing, carrying anything (bag, weapon, *etc.*).
 - Do not approach the person, isolate yourself from them, wait for police, and secure your area.
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Structural Failure

- Remain calm, alert, and evacuate immediate area – call Physical Plant Division at **352-392-1121**
 - **Call UFPD** immediately at **352-392-1111**, identify the problem and give them a return telephone number.
 - Prepare to leave the building immediately
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Personal Threats

For all personal threats including assault, armed hold-ups, robbery, persons at risk (suicide), *etc.*

1. Call **9-911** or **352-392-1111** immediately
 2. **Remain calm**: Do not panic or shout, avoid eye contact, do not make sudden movement
 3. Do not take risks: Hand over what ever is requested, do not do anything which may antagonize the offender
 4. Do only what you are told: Do not volunteer any other information.
 5. Telephone: Call University Police Department **352-392-1111** or **9-911**, give your name, room number, building.
 6. Record: Immediately fill out the personal threat report with the offender's description, what they may have taken (model and serial numbers), descriptions of any items they may have or any other relevant details.
 7. Personal threat report: Sex, height, voice, clothing, tattoos, jewelry, items touched, *etc.* also note type of vehicle used for escape, registration number if possible, and last known direction.
 8. For an armed offender as above plus: Where possible, alert others without leaving your room. Call UFPD at **352-392-1111** or **9-911** immediately. If anyone is injured treat with first aid until further assistance arrives.
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DO NOT ATTEMPT ANY ACTION WHICH PUTS YOUR LIFE OR OTHERS IN DANGER

- Follow instructions of persons in charge and prepare to evacuate if necessary.

Essential services faults include – water, electricity, gas, telephones, plumbing, security systems, computers, fire detection/suppression systems, air conditioning etc. Procedure when an essential service is faulty or fails after hours contact Emergency Maintenance at 352-392-1121..

Internal Emergency

Personal Threat Report

TO BE COMPLETED IMMEDIATELY AFTER INCIDENT BY STAFF OR STUDENT. TRY TO BE AS DESCRIPTIVE AS POSSIBLE. USE A SEPARATE FORM FOR EACH OFFENDING PERSON'S DESCRIPTION.

Threat details: _____

OFFENDER'S DETAILS/DESCRIPTION

Any Names or Nicknames used _____

Approximate Age _____ Male or Female _____

Height _____ Weight _____

Ethnic Origin _____

Complexion: Fair Dark
 Pale Fresh
 Ruddy Suntanned
 Pimply Normal

Hair: Straight Wavy
 Bald Curly
 Thick Long
 Crewcut Short

Eyes: Size: _____ Colour: _____
 Intense Stare Squint

Lips: Size: _____ Shape: _____

Nose: Size: _____ Shape: _____

Facial: Mustache Beard

Spectacles: Size: _____ Colour: _____

Build: Thin Stout Overweight
 Medium Small Obese

Posture: Erect Stooped
 Slouchy

Walk: Quick Springy
 Slow Limp
 Pigeon toed Medium

Hands: Callused Soft
 Hairy Nails missing
 Deformed fingers

Gloves: Type: _____ Colour: _____

Voice: Thick Slangy Accent
 Clear Loud Soft

Voice Impediment: Lisp Stutter

YOUR CONTACT DETAILS

Name: _____

Staff/Student no.: _____

Email: _____

Phone (w): _____ Mobile: _____

Faculty/Division/School/Unit: _____

Signature: _____

SECURITY SERVICES USE ONLY

IRISTI Report Follow up Interviewed

Date: _____

Comments: _____

Hazardous Waste

I. HAZARDOUS WASTE CHARACTERISTICS

1. Ignitable -

- a) Flammable Liquids - Flashpoint $<140^{\circ}\text{F}$: Ex. Alcohols, Benzene, Toluene, Xylene, Acetonitrile
- b) Oxidizers: Ex. Nitrates, Perchlorates, Bromates, Permanganates, Peroxides, Periodates
- c) Organic Peroxides: Ex. Benzoyl Peroxide and Methyl Ethyl Ketone Peroxide

2. Corrosive - Aqueous liquids with $\text{pH} \leq 2$ or $\text{pH} \geq 12.5$

- a) Inorganic Acids: Ex. Hydrochloric Acid, Sulfuric Acid, Nitric Acid, Phosphoric Acid
- b) Organic Acids. Ex: Formic Acid, Lactic Acid, Acetic Acid
- c) Bases: Examples: Hydroxide solutions, Amines

3. Reactive - materials which can react violently with water, create toxic and/or flammable gases when mixed with water, ignite or react upon exposure to air, or are capable of detonation at standard temperature and pressure.

- | | | |
|--|-----------------------------|----------------------------------|
| a) Sulfides and Cyanides | d) Dinitro - and Trinitro - | g) Perchlorate crystal formers - |
| b) Peroxide formers | compounds - Picric Acid | Perchloric Acid |
| c) Alkali metals - Sodium,
Potassium, Lithium | e) Carbonyl compounds | |
| | f) Isocyanates | |

4. Toxic - A selected group of eight (8) heavy metals, ten (10) pesticides, and twenty-two (22) organic chemicals are classified as hazardous due to their toxicity characteristic. Any detectable amount of these chemicals must be identified on a hazardous waste label.

8 Heavy Metals: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver

II. LABELING

1. Put the Hazardous Waste label on the container BEFORE any waste is put into the container.
2. Abbreviations and formulas are not permitted.
3. The % of each chemical constituent must be listed, and these %'s must total 100% including water.
4. Ensure that the Principal Investigator's name, building, and room number are included on the label.

III. WASTE SEGREGATION

For safety reasons and waste management methods the following should be kept separate when possible:

- | | | |
|---------------------------------|-------------------------------|---------------------------------|
| • Flammable Liquids & Oxidizers | • Non-halogenated Organic | • Ethidium Bromide |
| • Acids | Compounds | • Formalin/Formaldehyde |
| • Bases | • Oils | • Chromerge |
| • Oxidizers | • Air Reactive Materials | • Photographic Waste |
| • Halogenated Organic | • Water Reactive Materials | • Aqueous Heavy Metal Solutions |
| Compounds | • Mercury & Mercury Compounds | |

Check that chemical waste is compatible with its container. Nitric acid must be placed in a glass container. Used oil must be stored in containers provided with secondary confinement and be labeled as "Used Oil". All waste containers must have at least one inch of headspace to allow for expansion.

IV. WASTE MINIMIZATION

Waste minimization reduces the amount and/or toxicity of chemical wastes that must be disposed as hazardous waste. There are two methods of waste minimization. Source Reduction: The most desirable method of waste minimization is source reduction. This is any activity that reduces or eliminates the generation of chemical hazardous waste at the source. This can be accomplished by good materials management, substitution of less hazardous materials, and good laboratory procedures. Recycling: The second most desirable approach. When a waste material is used for another purpose, treated and reused in the same process, or reclaimed for another process, it is considered recycling.

Satellite Accumulation Area

HAZARDOUS WASTE - SATELLITE ACCUMULATION AREA

Containers

- Compatible with contents
- Good condition / no leaks or spilled chemicals on outside / sealable lid (e.g. screw cap)
- Properly labeled as soon as any amount of waste is added
- Never overfill. Leave 1" headspace to allow for expansion and prevent spills

Maximum Quantities

- Hazardous Waste must not exceed a total of 55gal
- P-listed waste must not exceed 1 kg or 1 quart

Absolutely **NO** liquids or needles in debris/solid waste containers

CAUTION

Check chemical compatibility before adding waste to a container

- Keep out of SAA -
All other products and
Non-hazardous waste

Print current
Waste Manager

Post SAA sheet

Lids/caps on
except
when filling

Completely fill out
Hazardous Waste labels

Only use
"Used Oil"
labels for
waste oil

ACIDS

BASES

Separate Incompatibilities

Never store next
to drain or sink

Satellite Accumulation Area

Location: in same room where waste is generated; ideally in a storage cabinet or, if on the floor, in an isolated, low-traffic area