

CHEMICAL SPILL RESPONSE GUIDE

Revised 2005

EMERGENCY PHONE NUMBER

2222

SPILL RESPONSE PROCEDURES Major Spill

In the event of a spill which:

- 1) Involves the release of a type or quantity of a chemical that poses an immediate risk to health; or
- 2) Involves an uncontrolled fire or explosion:
 - Evacuate the building by activating the nearest fire alarm.
 - Call 2222 and give details of the accident including location, types of hazardous materials involved, and whether there is personal injury.
 - If the accident involves personal injury or chemical contamination, follow the above steps as appropriate and at the same time:
 - Move the victim from the immediate area of fire, explosion, or spill (if this can be done without further injury to the victim or you).
 - Locate nearest emergency eyewash or safety shower. Remove any contaminated clothing from the victim and flush all areas of the body contacted by chemicals with copious amounts of water for 15 minutes.
 - Administer first aid as appropriate and seek medical attention.

SPILL RESPONSE PROCEDURES Minor Spill

In the event of a spill involving the release of a type or quantity of a chemical which does not pose an immediate risk to health and does not involve chemical contamination to the body:

- 1) Notify lab personnel and neighbours of the accident.
- 2) Isolate the area. Close lab doors and evacuate the immediate area if necessary.
- 3) Remove ignition sources and unplug nearby electrical equipment.
- 4) Establish exhaust ventilation. Vent vapours to outside of building only (open windows and turn on fume hoods).
- 5) Locate spill kit.
- 6) Choose appropriate personal protective equipment (goggles, face shield, impervious gloves, lab coat, apron, etc.)
- 7) Confine and contain spill.
Acid and base spills should be neutralized prior to cleanup.
Cover with appropriate absorbent material.
Sweep solid material into a plastic dust pan and place in a sealed container.

- 8) Wet mop spill area. Be sure to decontaminate broom, dustpan, etc.
- 9) Put all contaminated items (gloves, clothing, etc.) into a sealed container or plastic bag. Inform Stuart Mather (3899) that the sealed waste container needs to be picked up and disposed of.
- 10) Return spill kit to storage location.
- 11) Inform the Laboratory Manager.
- 12) Arrange to have the spill kit replaced.

IF SPILL IS:

- **Greater than 2.5lt**
- **Very toxic**
- **Poses a fire hazard**
- **If you need assistance**

CALL:

- **THE UNIVERSITY CHEMICAL SAFETY OFFICER (Dr JEFF DAVIS – 7934); or**
- **UNIVERSITY SECURITY ON 2222 AND ASK FOR THE UNIVERSITY CHEMICAL SAFETY OFFICER TO BE CONTACTED – if this fails, University Security will call the fire brigade**

SPILLS REQUIRING SPECIAL PROCEDURES

Bromine

- Neutralize spill with a 5% solution of sodium thiosulfate.
- Absorb with inert absorbent material

Hydrofluoric Acid

See special emergency treatment instructions (located above the fume hood and in first aid kit)

- For spills of any amount of concentrated HF or buffered HF outside of a fume hood ***EVACUATE LABORATORY AND CALL 2222 FOR FIRE BRIGADE ASSISTANCE***
- For small spills of dilute HF, use the HF spill kit

Mercury

- Use the special mercury spill kit
- Use aspirator bulb or suction device to collect mercury beads (DO NOT USE VACUUM CLEANER).
- Mop up mercury with mercury decontaminating powder.
- The University Chemical Safety Officer (Dr Jeff Davis – 7934) and ask for assistance if you are unable to accomplish adequate clean up.
- Label waste with a Hazardous Chemical Waste Tag and inform Stuart Mather (3899) that the sealed waste container needs to be picked up and disposed of.

ACID AND CAUSTIC SPILL KIT USAGE

DO NOT USE FOR HF, BHF OR BOE

- 1) ENSURE YOU ARE WEARING APPROPRIATE PROTECTIVE CLOTHING (GOGGLES, GLOVES, SHOES)
- 2) NEUTRALISE AND ABSORB SPILL (CONTAINER 2 IN SPILL KIT)
 - a. CIRCLE THE SPILL WITH SPILL TAMER COMBINED NEUTRALISER/ABSORBER (CONTAINER 2 IN THE SPILL KIT).
 - b. FILL CIRCLE WITH NEUTRALISER/ABSORBER. USE SUFFICIENT NEUTRALISER/ABSORBER TO GET UNIFORM COLOUR CHANGE.
- 3) SCOOP UP WASTE IN PLASTIC WASTE BAGS (SCOOP AND BAGS IN CONTAINER 2 IN SPILL KIT).
- 4) USE SPONGE FOR FINAL CLEAN UP. PLACE USED SPONGE IN WASTE BAGS.

SOLVENT SPILL KIT USAGE

- 1) ENSURE THERE IS ADEQUATE VENTILATION AND THAT YOU ARE WEARING APPROPRIATE PROTECTIVE CLOTHING (GOGGLES, GLOVES, SHOES)
- 2) ABSORB SPILL (CONTAINER 2 IN SPILL KIT)
 - a. CIRCLE THE SPILL WITH SPILL TAMER ABSORBER (CONTAINER 2 IN THE SPILL KIT).
 - b. FILL CIRCLE WITH ABSORBER.
- 3) SCOOP UP WASTE IN PLASTIC WASTE BAGS (SCOOP AND BAGS IN CONTAINER 3 IN SPILL KIT).
- 4) USE SPONGE FOR FINAL CLEAN UP. PLACE USED SPONGE IN WASTE BAGS.

HF ACID SPILL KIT USAGE

- 1) ENSURE YOU ARE WEARING APPROPRIATE PROTECTIVE CLOTHING (GOGGLES, GLOVES, SHOES)**
- 2) CONVERT HF TO H_2SO_4 AND MgF_2 (CONTAINER 2 IN SPILL KIT)**
 - a. CIRCLE THE SPILL WITH CONVERTER MIXTURE (CONTAINER 2 IN THE SPILL KIT).**
 - b. FILL CIRCLE WITH CONVERTER. USE SUFFICIENT CONVERTER TO GET WET SLURRY.**
- 3) NEUTRALISE CONVERTED SLURRY (CONTAINER 3 IN SPILL KIT)**
 - a. CIRCLE THE WET SLURRY WITH NEUTRALISER MIXTURE (CONTAINER 3 IN THE SPILL KIT).**
 - b. FILL CIRCLE WITH NEUTRALISER MIXTURE.**
- 4) SCOOP UP WASTE IN PLASTIC WASTE BAGS (SCOOP AND BAGS IN CONTAINER 4 IN SPILL KIT).**
- 5) LABEL BAGS CAREFULLY.**