Chemical spill response procedures

Overview

Small chemical spills not requiring evacuation or specialized handling procedures can be cleaned up provided you have the proper personal protective equipment (PPE), resources, and training. This document provides a brief overview of the steps involved in cleaning up a small chemical spill. Print a copy and keep it with the rest of the material in your spill kit for quick access.

This document does not take the place of training. The steps provided below are purposefully general. Before you begin work with any hazardous material, always read through the Safety Data Sheet (SDS) to determine the appropriate PPE, required engineering controls, and what to do in the event of a spill. In addition, the SDS will provide guidance on the proper disposal considerations for your specific hazardous material. Do not hesitate to contact EHS with any questions.

Chemical safety contact information

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<th>SFU Local</th>
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<tbody>
<tr>
<td>Director, Research and Laboratory Safety</td>
<td>2-7265</td>
<td>(604) 375-3310</td>
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<tr>
<td>Program Manager, Chemical Safety</td>
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Chemical spill kit contents

All of the items listed below are available at SFU Science Stores. It is recommended to keep your spill kit in a labelled plastic 20 L pail, allowing quick transport to the location of the spill. Check the contents and condition of your spill kit once a month.

- 20 L plastic pail
- Chemical spill response procedures (this document)
- Spill-X neutralizer – one container each Spill-X-A (for acids), Spill-X-C (for caustics), and Spill-X-S (for solvents) if applicable
- Plastic dust pan and hand broom
- Garbage bags
- Disposable nitrile gloves
- Safety goggles
- pH test strips
- Small glass beaker
- Spatula
- Duct tape
Chemical spill response

Information
1. Advise lab occupants of the spill and evacuate the area.
2. Notify your supervisor and/or lab coordinator of the spill. Provide details such as quantity spilled and chemical name.

Risk assessment
3. Conduct an initial risk assessment to determine if:
   - Building evacuation is required. If yes, pull the fire alarm and call 911.
   - External resources are required to contain and clean up the spill. If not, continue to step 4.

Clean up
4. Ensure the spill area has adequate ventilation to clear gases or vapours generated during the neutralization process. If there is a potential for gases to concentrate in the area, or if odours are overpowering, leave, mark the door, and contact Campus Public Safety at 2-4500.
5. Wear appropriate PPE such as safety glasses and gloves.
6. Select the appropriate neutralizer or vapour inhibitor:
   - Spill-X-A for acid spills
   - Spill-X-C for caustic spills
   - Spill-X-S for solvent spills
7. Apply the powder around the edge of the liquid.
8. Sprinkle the powder towards the centre of the spill. With a plastic dustpan and brush, push the powder towards the centre until all liquid is absorbed. If necessary, add more neutralizing powder.
9. If cleaning up a solvent spill, proceed to step 13.
10. For acids and caustics, using a spatula, place a small quantity of the mixture into a 100 mL beaker and add enough water to afford a clear aqueous layer above the solid.
11. Stir the mixture and test with pH test strips. The pH should be between 3 and 10.

Disposal
12. When neutralization is achieved, scoop the mixture with a dustpan into a disposal bag.
13. Rinse the spill area with water and wipe up.
14. If uncertain about disposal, contact your supervisor or EHS.
15. Disposal will vary depending on the liquid neutralized. After neutralization, some liquids produce a mixture which can go to landfill. Other liquids retain toxic properties and must be handled as special waste. For example, chromic acid can be neutralized but not detoxified.

Documentation
17. If an employee visited a physician, or was absent beyond the day of the incident (due to the incident), then the supervisor must complete a WorkSafeBC Form 7.