Chemical Spill Response Kits

Chemical spill response kits are a critical element in every work area where hazardous materials are present!

Every CMU area with hazardous materials present should have a spill response kit designed for ALL OF THE TYPES OF HAZARDS PRESENT (don’t forget a kit for mercury, if you have some!) The kit may be purchased as a “package” or be individually designed for specific needs. Both the kits and the individual items can be purchased from safety supply companies. (Web search: “chemical spill kit supplies”)

1. **You must be trained to perform spill response!** You can harm yourself, others and the area if you do not respond properly. Contact EH&S to receive training.

2. In responder training, you will learn what constitutes a minor vs. a major spill. **You must NOT respond to a major spill.** A *minor* spill is a small quantity of a lower hazard item, provided the quantity is within the scope of your kit. A *major* spill is either large quantity or high hazard (or both!)

3. Refer to the laminated Emergency Response Guide in your work area for assistance in chemical spill response.

When preparing a spill response kit, you must consider the following types of items:

1. **Personal Protective Equipment:** The kit must have chemical goggles, gloves appropriate for the hazards present, and perhaps a coverall to protect your clothes during the response. **You should not respond to a spill that requires respiratory protection!**

2. **Sorbents or similar material:** These items will collect/absorb/neutralize the spilled material in some fashion. They may be sorbent pads, socks or loose material. For solvent spills, some products bind up the liquid. For mercury, granulated material amalgamates with the mercury to render it less hazardous for clean-up.

3. **Decontamination material:** These items help render the spill location non-hazardous (or less hazardous,) by either neutralizing the hazard or helping it to be cleaned thoroughly.

4. **Waste disposal items:** These include disposal bags and ties, scoops to pick up loose sorbent, rags for wiping the area, waste tags for disposal of the waste (these are CMU hazardous waste tags!)

Please use the chart on the next page to identify items you will need to have in your spill kit.

- **Remember that the spill response kit should be clearly marked and its location must be known by all area workers.**
- **Also remember to replace materials used in a spill clean-up promptly as well. It is a very common problem to go to the kit at the time of a spill and find insufficient materials present, as they were previously used and not replaced!**
<table>
<thead>
<tr>
<th>Hazard</th>
<th>Items needed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>All chemicals</td>
<td>• Goggles&lt;br&gt;• Protective gloves (appropriate for the hazards present and being addressed)&lt;br&gt;• Waste bags and ties&lt;br&gt;• Small whisk broom and dust pan&lt;br&gt;• Tongs or large forceps (for picking up sorbent pads)</td>
<td>Be sure there are no metal items here—they may cause sparking and induce flammable materials to ignite.&lt;br&gt;The broom and dust pan are for cleaning up loose sorbent materials.</td>
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<tr>
<td>Acids and Bases</td>
<td>• Neutralizers for each type of material; they may be liquid or granular&lt;br&gt;• pH paper&lt;br&gt;• Poly-backed sorbent pads (see below) for acetic acid</td>
<td>Some neutralizers offer a color change to indicate neutralization is complete&lt;br&gt;pH paper will help you determine whether a spill has been properly neutralized</td>
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<tr>
<td>Organic Solvents</td>
<td>• Sorbent pads, pillows or socks (or any combination)&lt;br&gt;• Loose sorbent, such as cat litter&lt;br&gt;• Poly-backed sorbent pads</td>
<td>Poly-backed sorbent pads help contain vapors from the spill, preventing them from getting into the air where you may be trying to perform the clean-up</td>
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<tr>
<td>Hydrofluoric acid</td>
<td>• HF-specific response materials&lt;br&gt;• HF-antidote gel (HF=Hydrofluoric Acid!)</td>
<td>Typical acid pads and neutralizers are not generally appropriate for HF spills&lt;br&gt;HF antidote gel should be in the area anyway; be sure it is not expired!</td>
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<tr>
<td>Mercury</td>
<td>• Any of several types of mercury-specific pick-up kits</td>
<td>Various options are available for this, including amalgams (described earlier) as well as aspirating devices to collect elemental mercury, and mercury-specific sorbent materials</td>
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<tr>
<td>Formaldehyde</td>
<td>• Formaldehyde-specific spill response kits</td>
<td>These materials aid in reducing exposure to formaldehyde gas by immobilizing formalin and transforming it to an easily removed semi-solid mass.</td>
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**Related Fact Sheets:**
- Chemical Spill Response Strategies
- PPE (Personal Protective Equipment) Fact Sheet

**Our Mission:**

Environmental Health & Safety (EH&S) is committed to providing health and safety services that protect the University community and the environment.