

# Fact Sheet

# Mercury

## Mercury Spill

### Small Mercury Spill (Less Than Two Tablespoons)



1. **Evacuate the spill area**– Before people leave, be sure that their shoes, clothing, and other articles have not been splashed with mercury. Restrict admission to only those persons necessary to clean up the spill. Children and pets should be kept clear of the spill area.
2. **Lower the Temperature** by turning down the thermostat. The cooler temperatures will lessen the amount of mercury vapors released into the air. Remember that mercury vapors are odorless and colorless.
3. **Turn off ventilating or air conditioning systems** that could circulate air from the spill area to other parts of the building.
4. **Close interior doors** leading to other inside areas and open exterior doors and windows.

**Caution:** Mercury vapors are readily absorbed through the lungs into the bloodstream and are therefore, particularly hazardous. In extreme situations, even very small amounts of metallic mercury (several drops) may raise air concentrations to levels that may be harmful to human health. Mercury vapors are also heavier than air and may linger in higher concentrations close to the floor. Children that crawl or play in these areas are at the highest risk of exposure.

5. **Contain the spill** - Surround or block off the mercury to keep it from spreading onto sloped or porous surfaces. Divert all mercury away from floor drains, cracks, or crevices that may impact groundwater, surface water, and soils.
6. **Ventilate the room** to the outdoors. *(Use fans to force air circulation for a minimum of one hour after clean up).* In an office building, increase the air exchange rate for one day.
7. **Special mercury vacuum** - Special mercury vacuums are commercially available for larger spills but require advanced training to operate properly. When necessary, they may be provided for a fee by professional spill remediation contractors. **Never use a household or commercial vacuum.**
8. **Assemble clean-up supplies** or obtain a mercury spill kit. Mercury spill kits are commercially available and convenient, but not absolutely necessary to clean up a small mercury spill.

**Never use a broom on a mercury spill** because it will only scatter the mercury droplets making them harder to find and pick up.

The following are some common household articles that could be used to construct an in-home mercury cleanup kit:

- § Eye dropper
- § Goggles
- § Paper Towel
- § Plastic container with lid
- § Plastic sheeting
- § Rubber squeegee

- § Tape (wide, duct or masking)
- § Tray or box
- § Shaving cream
- § Flashlight
- § Napkins
- § Plastic bags with zipper seal
- § Plastic dust pan
- § Rubber gloves
- § Syringe without needle
- § Trash bags
- § Wide mouth container

9. **Dress appropriately** - Remove all jewelry from hands and wrists so the mercury does not combine (amalgamate) with the precious metals. Change into old clothes and shoes that can be safely discarded should they happen to become contaminated. Put on rubber gloves and goggles or safety glasses.
10. **Pick up all visible mercury droplets** - Inspect the spill zone with a bright light to help illuminate any hidden droplets. Clean up any metallic beads of mercury by using a plastic squeegee or index card and plastic dust pan. With the index or plastic card, sweep the mercury toward the center of the spilled area away from any carpet, fabric, or porous surfaces. Carefully combine and consolidate the mercury droplets. Next, slide droplets onto a sheet of rigid paper like an index card.
11. **Gently transfer mercury into an unbreakable plastic container** like a small Tupperware container with a locking or air tight lid (*avoid using glass*). If necessary, suction off the droplets using an eye dropper or syringe. Duct tape may also be used to clean up any tiny remaining mercury droplets. Place the plastic container inside a second plastic container to provide additional containment protection. Tighten each lid securely so that liquid and vapors will be contained.
12. **Place the mercury waste container(s) into a zip-loc plastic bag** - This should ensure that in the event of any leakage, all mercury will be safely contained within the packaging. Label the package "Elemental Mercury Waste, (Hazardous)," and store in a secure place away from children. Contact the St. Clair County Landfill for disposal instructions.
13. **Remove and dispose of contaminated carpet or other articles that have directly contacted mercury.** It may be necessary to remove contaminated carpet from the room where the spill incident occurred. Double or triple wrap these remnants in plastic trash bags. Do not expose to heat or incinerate.

**Never pour liquid mercury or mercury compounds down the drain!** Since mercury is heavier than water, it will accumulate in the "S" trap of the drain and will continue to emit harmful vapors.

**Never place mercury laden fabrics in a washing machine!**

Special precautions should be taken if mercury was spilled in a high traffic area or a confined area where children or infants play. Young children playing on the floor are particularly at risk to mercury's effects on the central nervous system. If this sounds like your situation, discuss the incident with your family doctor to determine whether additional mercury testing should be conducted for your family.

14. **Sprinkle fine powder sulfur or spray shaving cream on the spill site** to bind any remaining mercury. This may be supplied in mercury spill kits as mercury vapor absorbent or purchased separately from garden supply stores or chemical supply houses. Apply over hard to reach areas such as cracks and crevices to minimize the release of mercury vapors. In instances where furniture has been exposed to mercury, wash fabric thoroughly and allow all items to air out

completely. Mercury may lodge in porous areas like carpet backing or cracks and crevices of wood floors.

15. **Check carefully for missed mercury.** To aid in detection, a high intensity flashlight may be used to better illuminate the spill area. Residual mercury may then be uplifted using a variety of techniques including vinegar wash followed by hydrogen peroxide. To combat any hydrogen sulfide odors generated from mixing the two chemicals, an alternate method would be to wipe the area with a vinegar-soaked swab, followed by a peroxide wipe.
16. **Set aside everything that you think might be contaminated with mercury** - Package materials securely and label as 'Elemental Mercury: Hazardous Waste.' Specific labeling and disposal requirements may differ depending on whether the spill occurred at a household or at a 'regulated business.'
17. **Do not place mercury contaminated substances in the trash** unless otherwise instructed to do so by proper authorities. This is especially important if your trash goes to an incinerator. Contact the St. Clair County Landfill (810) 985-2443 for disposal instructions.

## **Large Mercury Spill (More Than Two tablespoons or Exceeds One Pound)**

### **Get Professional Help!**

In the meantime, quickly do the following:

- § Close off the area immediately to people and animals.
- § Call **911** or your local fire department as human health may be adversely impacted.
- § Turn down the temperature or lower the thermostat. Temperature should be maintained below 65° F.
- § Open windows and ventilate the area.
- § Surround and contain the spill. Prevent liquid mercury from running into nearby cracks, crevices, drains, and surface waters. Never pour mercury down the drain. Mercury is heavier than water and will get trapped in the plumbing system.
- § Notify state and local authorities. For a release to the environment of one pound or more, it is mandatory under federal regulations to call the numbers listed below:
  - *National Response Center (NRC) 1-800-424-8802*
  - *DEQ's Pollution Emergency Alerting System (PEAS) 1-800-292-4706*
  - *Your Local Emergency Planning Committee (LEPC)*



***For more sources of information on this topic visit:***

ST. CLAIR COUNTY HEALTH DEPARTMENT [www.scchealth.co](http://www.scchealth.co)

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES [www.michigan.gov/mdhhs](http://www.michigan.gov/mdhhs)

CENTERS FOR DISEASE CONTROL AND PREVENTION [www.cdc.gov](http://www.cdc.gov)

ENVIRONMENTAL PROTECTION AGENCY [www.epa.gov](http://www.epa.gov)