

WHAT IS MERCURY?

Mercury (also known as quicksilver) is a silvery metal that is liquid at room temperature. In its pure form, it is used in thermometers, barometers, blood pressure manometers, silent switches, and many other products. Once released from these devices, it slowly vaporizes or is attacked by certain bacteria to form organic mercury compounds.

HOW DOES IT AFFECT ME?

Inhaling or ingesting mercury can cause irreversible damage to the brain, kidneys, or to developing fetuses. Brief exposure to a large amount of mercury can have similar effects, but there is a better chance of full recovery. Common symptoms of mercury poisoning include shakiness, memory loss, and signs of kidney disease.

IF A SPILL OCCURS...

1. Isolate the spill immediately.

Even if it falls just a short distance, mercury will splatter into very fine globules that are hard to remove. If the spill is on a raised surface, contain it so the metal doesn't roll onto the floor.

2. Close off all heating, air conditioning, and ventilation ducts.

Open a window if available. Leave the room and close the door. Seal around the door with duct tape or similar material to prevent air from the contaminated room from reaching other parts of the building.

3. Contact health and safety personnel.

Call the Kansas Department of Health and Environment (KDHE) Northeast District Office in Lawrence at (785) 842-4600. If unavailable, contact the City of Lawrence Waste Reduction and Recycling Division at (785) 832-3030 for assistance and disposal. Spills over two tablespoons must be reported to the EPA National Response Center 1-800-424-8802.

4. Get professionals to clean up the spill.

If the spill involves more than a few milliliters of free mercury or the material has splattered over a sizeable area, it is strongly recommended that you retain an environmental firm with the equipment and expertise to perform the cleanup.

DOS AND DON'TS

If you decide to proceed with further action to recover the mercury and remove or contain residuals, follow these procedures:

DON'T breathe vapors.

Use a respirator with filters designed for mercury. Provide adequate ventilation to the outside. Ventilation should be arranged to create negative pressure inside the contaminated area — that is, so the air moves from the interior of the building to the exterior.

DON'T allow the mercury to come in contact with skin and clothing.

Wear vinyl or plastic gloves — nitrile is preferred. If mercury comes in contact with clothing, remove the contaminated article and place it in a sealed plastic bag. If mercury comes in contact with the skin, carefully wipe the affected area with a moist towelette.

Do not flush the contaminants into a sewer system. Place all contaminated materials in a sealed plastic bag for proper disposal at the City of Lawrence / Douglas County Household Hazardous Waste Facility 832-3030.

DON'T wash the mercury into drains.

If the material is in a drain, seal the opening to prevent further flow, and seek professional assistance.

DON'T allow mercury to come into contact with products containing ammonia or chlorine.

These include Windex, Formula 409, bleach or other commercial cleaning products. The result may be a violent reaction.

DON'T use a household or industrial vacuum.

Only vacuums specifically designed to remove mercury may be used.

DO place the broken instrument, container, or item into a sealed plastic bag or sealable container. Do not move it to another room.

DO accumulate the scattered mercury drops with a plastic scraper and place in a sealed plastic bag or a plastic jar or bottle. Glass may be used, but the jar should be stored in a another non-breakable container. Leave the contained mercury in the room where the spill occurred.

RECOVERING MERCURY

1. Remove residues.

Once you have collected all the free mercury possible, cover the area with a mercury absorbent material to remove any microscopic globules. There are special materials for this purpose, but if these are unavailable, finely divided sulfur may be used. Sulfur generally is available from local garden stores, pharmacies, or hardware stores.

After applying the absorbent material, allow it to sit several minutes, or as directed on the container. Carefully sweep up the absorbent using a synthetic bristle brush and plastic collection scoop and place in a sealed plastic container. All utensils used during the cleanup are contaminated and should be placed in sealed plastic bags.

After all mercury residues have been removed, any inaccessible cracks or other surface anomalies should be dusted with a mercury vapor suppressant and the room sealed off for 24 hours.

2. Ventilate.

Ventilate to the outside: a window can serve as the ventilation point. After a 24-hour airing out, the mercury vapor suppressant should be collected and handled using the same procedures as the absorbents. The small amount of vapor suppressant remaining in inaccessible crevices may be left in place.

AFTER 24 HOURS...

3. Test for residues.

Surfaces should be checked for residual mercury with a direct sensing dye or mercury detection powder. The dye test will yield results in minutes; the powdered detection compounds require up to 48 hours for results. The dye will not detect airborne mercury; therefore, a combination of both methods is preferred.

4. Test the air.

Mercury vapors are colorless and odorless, so you need to use air sampling to determine if the cleanup was successful. Contact KDHE at (785) 842-4600 for names of firms with this capability. It's a good idea to have an updated list of these firms on hand.

RESOURCES AND NUMBERS

City of Lawrence/Douglas County Household Hazardous Waste Program

(785) 832-3030

Kansas Department of Health and Environment Bureau of Waste Management

(785) 296-1600

KDHE Northeast District Office

800 W. 24th Street, Lawrence, KS 66046

(785) 842-4600

Environmental Protection Agency

Region VII, (913) 281-0991

National Response Center

(800) 424-8802

Poison Control Center

(800) 332-6633

SPILL KITS

Specialized materials for cleanup of free mercury and detection of residuals are available from several suppliers including, but not limited to:

Lab Safety Supply, Inc.

P.O. Box 1368

Janesville, WI 53547

<http://www.labsafety.com>

Fisher Scientific

711 Forbes Ave.

Pittsburgh, PA 15219-9919

<http://www.fishersci.com>

MERCURY IS A HAZARDOUS WASTE!

The Kansas Department of Health and Environment, in consultation with the Agency for Toxic Substances and Disease Registry and the Environmental Protection Agency, has determined that mercury vapor levels above the following have been associated with adverse health effects: healthy non-pregnant individuals, 3.0 micrograms per cubic meter of air; pregnant women, young children, or chronically ill individuals, 0.3 micrograms per cubic meter of air.



If a spill is greater than 2 tablespoons, not on a porous surface or if the mercury droplets are widely dispersed in a room, it would be wise to call for professional assistance.

This general rule-of-thumb is based on the one pound (approximately 2 tablespoons) reportable quantity for a release under the federal Comprehensive Emergency Response, Compensation and Liability Act (CERCLA). In facilities that are subject to federal reporting requirements, if mercury in excess of one pound is released to the environment, it constitutes a "reportable quantity" incident and must be reported.

Waste mercury and mercury-contaminated materials are hazardous wastes and must be handled and disposed of in accordance with applicable state and federal laws.

If you are unsure of how to dispose of these wastes, contact the **City of Lawrence / Douglas County Household Hazardous Waste Program** at (785) 832-3030.

HANDLING MERCURY SPILLS



Lawrence has a lot to offer.
Let's keep it that way!

www.LawrenceRecycles.org

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City of Lawrence

PUBLIC WORKS

WASTE REDUCTION & RECYCLING

More information at:

www.LawrenceRecycles.org

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Information for this brochure was provided by the Kansas Department of Health and Environment (KDHE), Bureau of Environmental Remediation, Bureau of Waste Management, and Office of Public Information.