

- ✓ Shower thoroughly with special attention to the head and hands.
- ✓ Avoid shaking or air hosing soiled clothing.
- ✓ Store soiled clothing in vapor-proof containers.
- ✓ Use only the proper containers for waste and contaminated materials.
- ✓ Dispose according to local and state regulations.

When mercury spills or if vapor escapes from a container, decontamination is very difficult. Taking extreme precautions against these events is the most effective control.

For additional information and assistance, contact:

- » Your local MSHA office
- » **Metal/Nonmetal Mine Safety and Health**
Arlington, Virginia
202-693-9630
- » **Coal Mine Safety and Health**
Arlington, Virginia
202-693-9510
- » **Pittsburgh Safety and Health Technology Center**
Pittsburgh, Pennsylvania
412-386-6901

*U.S. Department of Labor
Mine Safety and Health Administration
Visit our web site at www.msha.gov*

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Working with Mercury

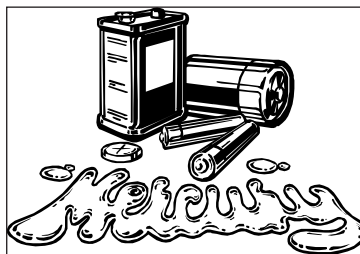


Health Hazard Information Card HH-16

Mercury (Hg) is a silver-white metal element that is liquid at ordinary room temperature. It occurs as metallic mercury, as cinnabar (HgS), and in perhaps 25 other inorganic mineral compounds. The elemental form vaporizes at any temperature down to almost 40 degrees below zero. Mercury and its vapor have no taste or smell. The specific gravity of mercury is 13.546; therefore, it is heavier than lead (specific gravity – 11.34) and, like lead and other “heavy” metals, it is a potent poison.

Exposure to metallic mercury or mercury compounds, even in small quantities over a period of time, can cause severe poisoning. Mercury can enter your body when you inhale vapors or swallow mercury-containing dust (ingestion), or by skin absorption.

Symptoms of chronic mercury poisoning are weakness, fatigue, inflammation and ulcers in the mouth, bleeding gums, loosened teeth, excessive salivation (spittle), tremors, and emotional instability. Acute poisoning causes nausea, abdominal pain, vomiting, headaches, diarrhea, and occasionally cardiac weakness. Exposure to organic mercury compounds can cause problems with vision, breathing, heart rate, hearing, and birth defects. Mercury affects the eyes, skin, kidneys, respiratory system, and the central nervous and peripheral nervous systems.



To prevent poisoning, management needs to:

- ✓ **Keep** mercury in proper, labeled, and securely closed containers.
- ✓ **Install** and **maintain** mercury-impervious flooring and work surfaces (prevent or repair cracks and crevices which might retain mercury).
- ✓ **Prevent** blowing with air or dry sweeping.
- ✓ **Use** a vacuum cleaner only if it is equipped with mercury vapor-absorbing filters.
- ✓ **Furnish** showering and changing facilities with storage for street clothes.
- ✓ **Provide** an eating area separated from work areas.
- ✓ **Supply** special chemical solutions or vapor-proof containers for mercury-contaminated materials or waste mercury.
- ✓ **Use** direct-read badges or detectors to monitor sites and workers.
- ✓ **Train** workers in hazards, good work practices, and emergency procedures.

And workers need to:

- ✓ **Avoid** storing work and street clothes in the same locker or closet.
- ✓ **Change** into clean clothing before leaving the job site.
- ✓ **Never store** or **eat** food in any place that might be contaminated with mercury.
- ✓ **Wash** hands and face thoroughly in warm soapy water before eating or drinking.
- ✓ **Refrain** from smoking in mercury work areas.
- ✓ **Avoid** shaking or air hosing soiled clothing.
- ✓ **Store** soiled clothing in vapor-proof containers.

- ✓ **Launder** contaminated clothing after each use.
- ✓ **Use** only the proper containers for waste and contaminated materials.
- ✓ **Shower** thoroughly – with special attention to the head and hands.

In case of a spill or release of vapors:

Any time one pound or more of mercury is released to the environment, it is mandatory to call the **National Response Center (NRC)**. The NRC hotline (800-424-8802) operates 24 hours a day, 7 days a week. Note that only two tablespoons of mercury weigh about one pound.

If you estimate your mercury spill to be greater than the amount in a thermometer, isolate the contaminated area and call your local or state health or state environmental agency. Or consider contacting an approved contractor to clean up and decontaminate the area.

You can clean up small mercury spills no greater than the amount contained in a thermometer from flat surfaces. To perform this clean-up:

- ✓ Wear disposable gloves and proper respirator when performing clean-up.
- ✓ Keep the area well-ventilated to the outside (i.e., windows open and fans running) during clean-up and for at least 24 hours afterwards.
- ✓ Turn off the ventilation system to prevent further spread of the vapors.
- ✓ Avoid walking through any contaminated area, and prohibit anyone else from entering.
- ✓ Use approved means of decontamination-chemical (commercially available powdered sulfur, charcoal impregnated with iodine or sulfur, etc.) and mechanical - promptly.