



# QUICK GUIDE TO HANDLE METALLIC MERCURY SPILL

## MERCURY BASIC INFORMATION

**MERCURY**

**DANGER**

### Introduction

Mercury (Hg) is a chemical element of atomic number 80. It's also known as quicksilver. Mercury is the only metallic element that is liquid at room temperature.



### Hazard Statement

Fatal if inhaled, may damage the unborn child, cause damage to the kidneys and central nervous system through prolonged or repeated exposure if inhaled or absorbed through the skin, very toxic to aquatic life with long lasting effects.

### Mercury's Properties

NAME	DESCRIPTION
CAS No.	7439-97-6
Symbol	Hg
Color	Silvery
Atomic No.	80
Phase	Liquid
Density	13.53 g/cm <sup>3</sup>
Melting Point	-38.83 °C
Boiling Point	356.73 °C
Volatility	0.056 mg/hr-cm <sup>2</sup> at 20 <sup>0</sup> C
Flammability	Not combustible
Water Solubility	Slightly soluble in water
Odour	Odourless

### Permissible Exposure Limit In USECHH\* Regulations, 2000

- Mercury, as Hg- (skin)
- Inorganic forms including metallic mercury = 0.025 mg/m<sup>3</sup>

\*(Use and Standard of Exposure Chemical Hazardous to Health)

### Sign and Symptoms

Sign and Symptoms Cause By Short-term Exposure To Mercury		
Cough, sore throat	Eye irritation	A metallic taste
Shortness of breath	Increase in blood pressure	in the mouth
Chest pain	of heart rate	Headache
Nausea, vomiting, Diarrhea		Vision problem
Sign and Symptoms Cause By Long-term Exposure To Mercury		
Anxiety	Loss of appetite	Tremors
Sleeping problems	Irritability	Change in vision
Forgetfulness	Fatigue	Change in hearing

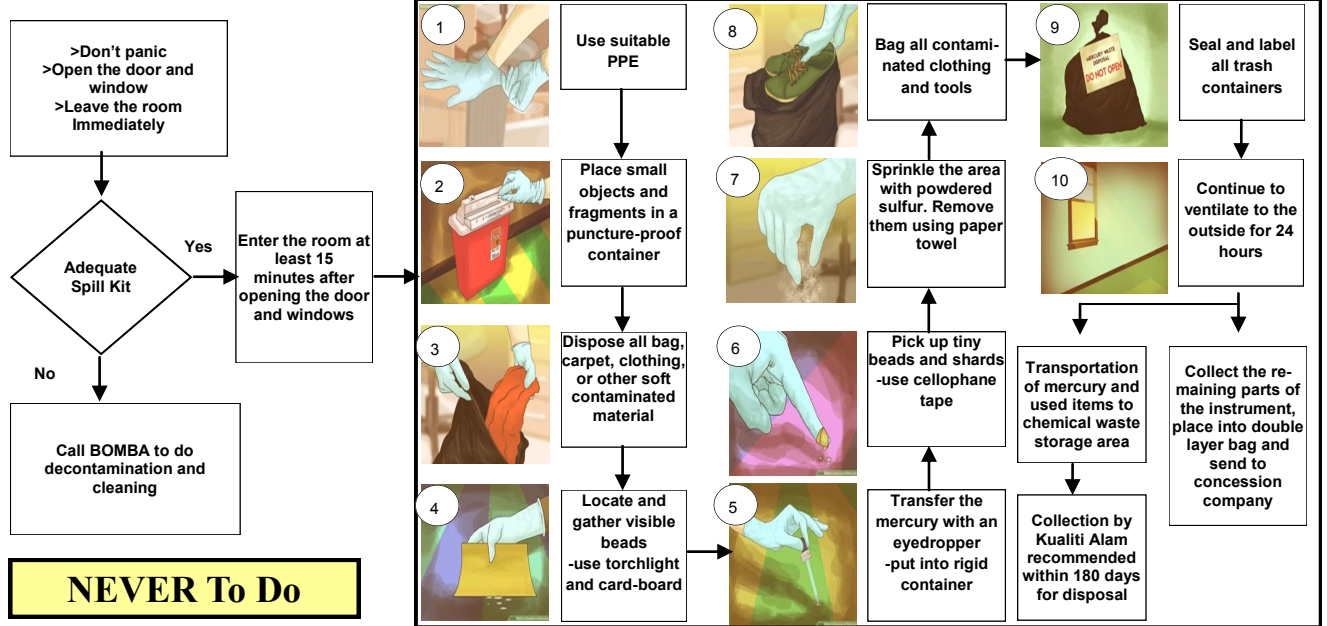
### Use Of Mercury

 Button Cell Batteries	 Gold mining
 Fluorescent Light Bulbs	 Blood Pressure Gauge
 Thermometer	 Barometer
 Dental Amalgams	



# MERCURY SPILLS: HOW TO HANDLE

## Step To Clean Up A Mercury Spill



### NEVER To Do

- Use vacuum cleaner** (Prohibited)
- Use broom** (Prohibited)
- Pour down a drain** (Prohibited)
- Walk around contaminated** (Prohibited)

### Checklist For Contents Of Mercury Spill Kit

<input type="checkbox"/> Torch light & batteries	<input type="checkbox"/> Cable tie x 10
<input type="checkbox"/> Card-board - two pieces	<input type="checkbox"/> Label for mercury disposal
<input type="checkbox"/> 2 inch (width) transparent cellophane tape	<input type="checkbox"/> Nitrile Gloves - 1 pair
<input type="checkbox"/> Two 10 cc syringe / eye dropper	<input type="checkbox"/> Goggles
<input type="checkbox"/> Sulphur powder - 250 grams	<input type="checkbox"/> Disposable Shoe covers
<input type="checkbox"/> Puncture proof plastic container for broken	<input type="checkbox"/> Paper towels
<input type="checkbox"/> Puncture resistant plastic bag (dustbin size) x 2	<input type="checkbox"/> Respirator
<input type="checkbox"/> Flow chart for Cleaning up and Disposal of Mercury (Attached outside the Mercury Spill Kit)	
<input type="checkbox"/> Safety Data Sheet for Mercury (Kept with the Mercury Spill Kit)	

\*\* Check the contents of the Mercury Spill Kit every 6 months including expiry date of battery and sulphur powder.

### Containers For Collected Mercury

- ✓ Air-tight, sealable plastic bags (small and large sizes, thickness: 40 to 150 microns)
- ✓ Air-tight, puncture-resistant, rigid plastic container with a wide opening for collecting mercury-contaminated glass from broken sphygmomanometers and thermometers. Example: urine container (for small broken pieces), 2.5L sharps bin (for larger broken pieces)
- ✓ Large plastic bags (thickness: 40 to 150 microns) to seal the collected mercury, material used for the clean up and used Personal Protective Equipment (PPE) for disposal.

### Personal Protective Equipment (PPE)

**CAUTION**

**PPE REQUIRED :**

- RESPIRATOR**
- GLOVES**
- SAFETY BOOTS**
- GOGGLES**

\*(For self-decontamination and cleaning of large spill may require additional PPE)

### Important!!!

- ✓ Are you sure about safe work procedures?
- ✓ Is the equipment in good condition and working properly? Is your respirator working properly? Check it every time.
- ✓ Look for signs of leaks, wear and damage before every job.
- ✓ Do you have a spill clean-up kit handy?
- ✓ If you find any problem, get it fixed. Don't just carry on working.
- ✓ Discard single-use gloves every time you take them off. Throw away other gloves at the end of the shift.
- ✓ Wash before eating, drinking
- ✓ If contact with skin, wash immediate and avoid to inhale mercury vapor
- ✓ If contact with skin or inhale mercury vapor, seek medical attention immediately
- ✓ Dispose waste according to Environmental Quality (Scheduled Wastes) Regulations, 2005