

Common Name: **MERCURY, ELEMENTAL AND INORGANIC COMPOUNDS**

Synonyms: Colloidal Mercury; Quicksilver

CAS No: 7439-97-6

Molecular Formula: Hg

RTK Substance No: 1183

Description: Heavy, silvery, liquid metal

## HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<b>3 - Health</b> <b>0 - Fire</b> <b>0 - Reactivity</b> <b>DOT#:</b> UN 2809 <b>ERG Guide #:</b> 172 <b>Hazard Class:</b> 8 (Corrosive)	Extinguish fire using an agent suitable for type of surrounding fire. <b>Mercury</b> itself does not burn. POISONOUS GASES ARE PRODUCED IN FIRE. Use water spray to keep fire-exposed containers cool.	<b>Mercury</b> reacts with ACETYLENE to form explosive <i>Acetylide</i> . <b>Mercury</b> can form explosive compounds with AMMONIA and will explode when mixed with CHLORINE DIOXIDE; OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); and METHYL AZIDE. <b>Mercury</b> is not compatible with COMBUSTIBLE MATERIALS; METALS (such as ALUMINUM and COPPER); CALCIUM; SODIUM CARBIDE; AMINES; LITHIUM; and RUBIDIUM.

## SPILL/LEAKS

**Isolation Distance:**

Spill: 50 meters (150 feet)

Fire: 500 meters (1/3 mile)

 Cover spill with a *Sulfur compound* to prevent vaporization and collect with a charcoal filter vacuum.

 Use *Zinc* or *Copper flakes* and a flashlight to check for remaining **Mercury** after clean-up.

**Mercury** is very toxic to aquatic life and bioaccumulates.

## PHYSICAL PROPERTIES

<b>Odor Threshold:</b>	Odorless
<b>Flash Point:</b>	Nonflammable
<b>Vapor Density:</b>	6.9 (air = 1)
<b>Vapor Pressure:</b>	0.002 mm Hg at 77°F (25°C)
<b>Specific Gravity:</b>	13.6 (water = 1)
<b>Water Solubility:</b>	Insoluble
<b>Boiling Point:</b>	674°F (357°C)
<b>Melting Point:</b>	-38°F (-39°C)
<b>Ionization Potential:</b>	10.4 eV
<b>Molecular Weight:</b>	200.6

## EXPOSURE LIMITS

**NIOSH:** 0.05 mg/m<sup>3</sup>, 10-hr TWA (as **Mercury vapor**)  
 0.1 mg/m<sup>3</sup>, Ceiling (as **Mercury**)

**ACGIH:** 0.025 mg/m<sup>3</sup>, 8-hr TWA (as **Mercury**)

**IDLH:** 10 mg/m<sup>3</sup> (as **Mercury**)

The Protective Action Criteria values are:

 PAC-1 = 0.3 mg/m<sup>3</sup>

 PAC-2 = 2.05 mg/m<sup>3</sup>

 PAC-3 = 4.1 mg/m<sup>3</sup>

## PROTECTIVE EQUIPMENT

<b>Gloves:</b>	Butyl, Nitrile, Neoprene, Polyvinyl Chloride, Silver Shield®/4H® and Viton (>8-hr breakthrough)
<b>Coveralls:</b>	Tychem® fabrics (>8-hr breakthrough)
<b>Respirator:</b>	>0.025 mg/m <sup>3</sup> - full facepiece APR with cartridges specific for <b>Mercury</b> >0.3 mg/m <sup>3</sup> - SCBA

## HEALTH EFFECTS

<b>Eyes:</b>	Irritation
<b>Skin:</b>	Irritation
<b>Inhalation:</b>	Nose, throat and lung irritation with coughing, wheezing and/or shortness of breath Nausea, vomiting and abdominal pain

## FIRST AID AND DECONTAMINATION

**Remove** the person from exposure.

**Flush** eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn. Seek medical attention immediately.

**Quickly** remove contaminated clothing and wash contaminated skin with large amounts of soap and water. Seek medical attention immediately.

**Begin** artificial respiration if breathing has stopped and CPR if necessary.

**Transfer** promptly to a medical facility.