



American Scientific, LLC

Safety Data Sheet

Section 1

Product Description

Mercury

Product Name and CAS #:	Mercury; Hg; CAS# 7439-97-6 RTECS: OV4550000
Recommended Use:	Science education applications
Synonyms/Chemical formula:	Quick Silver; Colloidal Mercury; Metallic Mercury; Liquid Silver; Hydragyrum
Manufacturer:	American Scientific, LLC 6420 Fiesta Drive, Columbus, OH 43235
Chemical Information:	800-227-1150 (8am-5pm (ET) M-F)
Chemtrec for Emergency:	800-424-9300 (Transportation Spill Response 24 hours)
Phone Number for Information:	(614) 764-9002
Fax Number for Information:	(614) 764-9043

Section 2

Hazard Identification

DANGER



GHS Classification:

Acute Tox. 1 (Inhalation; dust, mist)	H330
Repr. 1B	H360
STOT RE 1	H372
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Section 3 Composition / Information on Ingredients

Chemical Name: Mercury CAS # 7439-97-6 100%
 Toxicological Data on Ingredients: Mercury LD50: N/A LC50 N/A

Section 4 First Aid Measures

Emergency and First Aid Procedures: If exposed immediately call Poison Center

Inhalation: Inhalation: Fatal if inhaled H330
Eyes: Eyes: Causes damage to organs. Goggles needed. Medical attention H372
Skin Contact: Wash Skin, hands thoroughly after handling. P264
Ingestion: If swallowed, do not induce vomiting. Fatal; damage to organs H330, H372, P260

When inhaled, Mercury will be rapidly distributed throughout the body. Mercury will cross the blood-brain barrier, and become oxidized to the Hg (II) oxidation state. The oxidized species of Mercury can not cross the blood-brain barrier and thus accumulates in the brain.



Section 5 Firefighting Procedures

Extinguishing Media: Foam. Dry Powder. Carbon dioxide. Sand.

Fire Fighting Methods and Protection: Do not enter fire area without proper protective gear; including respiratory protection. Evacuate area.



Fire and/or Explosion Hazards: Not flammable. Vapors and oxides are toxic. Do not use heavy water stream. Reacts with some metals. Can react with metals to form amalgams.

Hazardous Combustion Products: Violent exothermic reaction or possible explosion occurs when mercury comes in contact with lithium; rubidium; Methyl Azide; Chlorine Dioxide and Liquid Hg, when mixed explode violently. Ammonia and Mercury can produce explosive.

Section 6 Spill or Leak Procedures

Small spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large spill: Corrosive liquid. Poisonous liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on SDS and local authorities.



Section 7 Handling and Storage

Precautions: Keep locked up. Keep container dry. Do not ingest. Do not breathe fumes/gas/vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals.



Storage: Keep container tightly closed. Keep container in a cool, well ventilated area. Do not store above 25 C (77 F)

Section 8

Protection Information

Control Parameters

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to work-station location.



Personal Protection:

Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 0.025 from ACGIH (TLV) United States. SKIN TWA: 0.05 CEIL: 0.1 (mg/m³) from OSHA (PEL) United States. Inhalation TWA: 0.025 (mg/m³) United Kingdom (UK) Consult local authorities for acceptable exposure limits.

Section 9

Physical Data

Formula: Mercury

Molecular Weight: 200.59

Appearance: Liquid **Color:** Silver White

Odor: Odorless **Threshold:** Not available

Critical Temperature: 1462 C (2663.6 F)

pH: (1% Soln/water): Not available

Melting Point: -38.87 C (-38 F)

Boiling Point: 356.73 C (674.1 F)

Flash Point: Not Available

Flammable Limits in Air: No data available

Vapor Pressure: Not available

Evaporation Rate (BuAc=1): No data available

Vapor Density: (Air=1) 6.93

Specific Gravity: 13.55 (Water =1)

Solubility in Water: Very slightly soluble in cold water

Log Pow (calculated): No data available

Autoignition Temperature: No data available

Decomposition Temperature: No data Available

Viscosity: No data available

Percent Volatile by Volume: No data available

Section 10

Reactivity Data

Stability: Stable

Instability Temperature: Not available

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, metals

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Groud mixtures of sodium carbide, mercury, lead, aluminum, or iron can react vigorously. A violent exothermic reaction or possible explosion occurs when mercury comes in contact with lithium, rubidium. Incompatible with boron diiodophosphide; ethylene oxide; metal oxides, metals (aluminium, potassium, lithium, sodium, rubidium) methyl azide, methylsilane, oxygen; oxidants(bromine, peroxyformic acid, chlorine dioxide, nitric acid, tetracarbonylnickel, nitromethane, silver perchlorate, chlorates, sulfuric acid, nitrates.); tetracarbonylnickel, oxygen, acetylinic compounds, ammonia, ethylene oxide, methylsilane, calcium,

Special Remarks on Corrosivity:

The high mobility and tendency to dispersion exhibited by mercury, and the ease with which it forms alloys (amalgam) with many laboratory and electrical contact metals, can cause severe corrosion problems in laboratories. Special precautions: Mercury can attack copper and copper alloy materials.

Polymerization: Will not occur.

Section 11**Toxicity Data**

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: LD50: Not available. LC50: Not available.

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified A5 (Not suspected for May cause damage to the following organs: blood, kidneys, live (CNS).

Other Toxic Effects on Humans:

Very hazardous in case of skin contact (irritant), of ingestion, of permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

May affect genetic material. May cause cancer based on anima cause adverse reproductive effects(paternal effects- spermatog mortality), and birth defects.

Special Remarks on other Toxic Effects on Humans:

**Section 12****Ecological Data**

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

**Section 13****Disposal Information**

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14****Transport Information**

DOT Classification: Class 8: Corrosive material

Identification: Mercury UNNA: 2809 PG: III

Special Provisions for Transport: Not available.



Section 15**Regulatory Information****Federal and State Regulations:**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Mercury
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute:

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. Very Toxic.

Section 16**Additional Information**

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV IDLH	Threshold Limit Value Immediately dangerous to life and health