

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/20/2024

Reviewed on 05/20/2024

1 Identification

- **Product identifier**
- **Trade name:** Mercury, Reagent ACS
- **Article number:** M2000
- **CAS Number:**
7439-97-6
- **EC number:**
231-106-7
- **Index number:**
080-001-00-0
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586
- **Information department:**
Technical Coordinator
Sherman Nelson shermann@aquasolutions.org
- **Emergency telephone number:**
Chemtec: 800-424-9300
Canutec: 613-996-6666



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity - Inhalation 2

H330 Fatal if inhaled.



GHS08 Health hazard

Toxic to Reproduction 1B

H360 May damage fertility or the unborn child.

Specific Target Organ Toxicity - Repeated Exposure 1 H372 Causes damage to the central nervous system, the peripheral nervous system, the kidneys, the liver, the blood system, the cardiovascular system and the gingiva through prolonged or repeated exposure.
Route of exposure: Inhalation.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS06



GHS08

- **Signal word** *Danger*

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· **Hazard statements**

Fatal if inhaled.

May damage fertility or the unborn child.

Causes damage to the central nervous system, the peripheral nervous system, the kidneys, the liver, the blood system, the cardiovascular system and the gingiva through prolonged or repeated exposure. Route of exposure: Inhalation.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment is urgent (see on this label).

Get medical advice/attention if you feel unwell.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *2

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

CAS: 7439-97-6 Mercury

· **Identification number(s)**

· **EC number:** 231-106-7

· **Index number:** 080-001-00-0

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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 0.15 mg/m³
- **PAC-2:** 1.7 mg/m³
- **PAC-3:** 8.9 mg/m³

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

CAS: 7439-97-6 Mercury

PEL Long-term value: 0.1 mg/m³
as Hg; see OSHA standard interpretation memo

REL Long-term value: 0.05* mg/m³
Ceiling limit value: 0.1 mg/m³
as Hg; *Vapor; Skin

TLV Long-term value: 0.025 mg/m³
as Hg; A4; Skin; BEI

- **Ingredients with biological limit values:**

CAS: 7439-97-6 Mercury

BEI 20 µg/g creatinine
LD50 Intraperitoneal: urine
Time: prior to shift
LD50: Mercury

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Color:	Silver-colored
Odor:	Odorless
Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	-38.86 °C (-37.9 °F)
Boiling point/Boiling range:	356.73 °C (674.1 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 0.00163 hPa (0 mm Hg)

· **Density at 20 °C (68 °F):** 13.54 g/cm³ (112.9913 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

Water: Fully miscible.

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- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

Inhalative	LC50/4h	0.5 mg/l (ATE)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** 3
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 3 (Assessment by list): extremely hazardous for water
 - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 - Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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· **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA 	UN2809
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	Mercury MERCURY
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="display: flex; align-items: center; gap: 10px;">   </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8, 6.1
<ul style="list-style-type: none"> · IMDG 	<div style="display: flex; align-items: center; gap: 10px;">    </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8/6.1
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; align-items: center; gap: 10px;">   </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8 (6.1)
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	III
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	Environmentally hazardous substance, liquid No Symbol (fish and tree)

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<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): 80 · EMS Number: · Segregation groups · Segregation Code 	<p>Warning: Corrosive substances</p> <p>F-A,S-B (SGG7) Heavy metals and their salts (including their organometallic compounds), (SGG11) mercury and mercury compounds</p> <p>SG24 Stow "away from" SGG17-azides</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations · Hazardous substance: 	<p>On passenger aircraft/rail: 35 kg</p> <p>On cargo aircraft only: 35 kg</p> <p>1 lbs, 0.454 kg</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>5 kg</p> <p>Code: E0</p> <p>Not permitted as Excepted Quantity</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN 2809 MERCURY, 8 (6.1), III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency) D**
- **TLV (Threshold Limit Value) A4**
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS06 GHS08

- **Signal word** *Danger*
- **Hazard statements**
Fatal if inhaled.

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May damage fertility or the unborn child.

Causes damage to the central nervous system, the peripheral nervous system, the kidneys, the liver, the blood system, the cardiovascular system and the gingiva through prolonged or repeated exposure. Route of exposure: Inhalation.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment is urgent (see on this label).

Get medical advice/attention if you feel unwell.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.

· Contact:

Date of Preparation / Last Revision:

· Date of preparation / last revision

*Revision 1.2, 05/20/2024: Reviewed SDS for accuracy. MH/STN
05/20/2024*

· Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Toxicity - Inhalation 2: Acute toxicity – Category 2

Toxic to Reproduction 1B: Reproductive toxicity – Category 1B

Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1

· * Data compared to the previous version altered.