



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Mercuric Chloride, 5% (w/v) Aqueous

Product Number: 4650

Other Identifying Product Numbers: 4650-1, 4650-16, 4650-32

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)

800-424-9300

CHEMTREC (International)

1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Acute Toxicity - Oral	Category 3	H301	P264, P270, P301+P310, P321, P330, P405, P501
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, P501
Germ Cell Mutagenicity	Category 1	H340	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 2	H361	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501
Hazardous to the Aquatic Environment (Acute)	Category 2	H401	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 2	H411	P273, P391, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H301	Toxic if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H340	May cause genetic defects.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

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Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes, mist, vapors, or spray.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H ₂ O	18.01 g/mol	7732-18-5	95.24
Mercuric Chloride	HgCl ₂	271.49 g/mol	7487-94-7	4.76



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SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: IF ON SKIN: Wash with plenty of soap and water. May cause irritation, redness and pain. May be absorbed through skin on prolonged exposure.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or physician. Dilute immediately with water or milk. Induce vomiting. Call a physician.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Toxic if swallowed. May cause an allergic skin reaction. Causes serious eye damage. May cause genetic defects. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. This product is highly toxic and should be handled with extreme care. Harmful if absorbed through the skin. Do not get in eyes, on skin, or on clothing. If ingested, give large quantity of water and induce vomiting. Call a physician. Wash areas of contact with plenty of water for at least 15 minutes. For eyes, get medical attention. **EYE CONTACT:** May cause irritation, redness, pain, and tearing. **SKIN CONTACT:** May cause irritation, redness and pain. May be absorbed through skin on prolonged exposure. **CHRONIC EFFECTS / CARCINOGENICITY:** Chronic exposure through any route can produce central nervous system damage. Can cause skin allergies and accumulate in the body. Repeated skin contact can cause skin to turn gray in color due to the mercuric compound.

4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Call a physician immediately. Immediately flush with plenty of water for at least 15 minutes. Remove any contaminated clothing. Wash with soap and water, then flush again with water. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire (Water, water spray, foam, or dry chemical). If using water, do not allow water run off to enter sewer.

5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters

Use protective clothing and NIOSH-approved breathing equipment appropriate for the surrounding fire.

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SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Wear gloves to protect from absorption through skin. Absorb with suitable material and containerize for proper disposal. Do not flush to sewer. Sprinkle area with Sulfur to suppress Mercury.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Mercuric Chloride (7487-94-7)	TLV-TWA	USA	"0.025 mg/m ³ TWA (as Hg)" As Mercury inorganic forms [RR-00569-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Mercuric Chloride (7487-94-7)	TLV-TWA	USA	"0.025 mg/m ³ TWA (as Hg)" As Mercury inorganic forms [RR-00569-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Mercuric Chloride (7487-94-7)	TLV-TWA	USA	0.025 mg/m ³ TWA (as Hg)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Mercuric Chloride (7487-94-7)	TLV-TWA	USA	"0.025 mg/m ³ TWA (as Hg)" As Mercury inorganic forms [RR-00569-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Mercuric Chloride (7487-94-7)	TLV-TWA	USA	"0.025 mg/m ³ TWA (as Hg)" As Mercury inorganic forms [RR-00569-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.

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Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: 3.2 (0.2 Molar)

Melting/Freezing Point: Approximately 0°C

Initial Boiling Point/Range: Approximately 100°C - Approximately 100°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.05

Solubility: Miscible

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

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10.3. Conditions to Avoid and Incompatible Materials

Formates, sulfites, phosphates, albumin, ammonia, gelatin, carbonates, hypophosphites, sulfides, alkalis, alkaloid salts, lime water, arsenic, antimony, bromides.

10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Toxic if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Rinse mouth. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50 (Oral, rat): Mercuric Chloride (1 mg/kg); LD50 (dermal, rat): Mercuric Chloride (41 mg/kg), details of toxic effects not reported other than lethal dose value. LDLo (Oral, man): 29 mg/kg, gastrointestinal effects noted; TDLo (Oral, man): 29 mg/kg, gastrointestinal, respiratory and kidney effects noted.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ Cell Mutagenicity:

May cause genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Carcinogenicity:

Not applicable.

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Reproductive Toxicity:

Suspected of damaging fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

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SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Sizes: 1 L, 4 L, 500 mL

UN Number: UN2024

Proper Shipping Name: Mercury compounds, liquid, n.o.s. (Mercuric Chloride)

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 1 L, 4 L, 500 mL

UN Number: UN2024

Proper Shipping Name: Mercury compound, liquid, n.o.s. (Mercuric Chloride)

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 L, 4 L, 500 mL

UN Number: UN2024

Proper Shipping Name: MERCURY COMPOUNDS, LIQUID, N.O.S. (mercuric chloride)

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



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SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Mercuric Chloride (CAS # 7487-94-7): 500 lb EPCRA RQ

Mercuric Chloride (CAS # 7487-94-7): 500 lb lower TPQ; 10000 lb upper TPQ

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Not listed.

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Mercuric Chloride (CAS # 7487-94-7): "1.0 % Supplier notification limit (includes any unique chemical substance that contains Mercury as part of that chemical's infrastructure, listed under Chemical Category N458)" As Mercury compounds [RR-00138-7]

Mercuric Chloride (CAS # 7487-94-7): "10 lb RT" As Mercury compounds [RR-00138-7]

Mercuric Chloride (CAS # 7487-94-7): 1.0 % Supplier notification limit (includes any unique chemical substance that contains Mercury as part of that chemical's infrastructure, listed under Chemical Category N458)

Mercuric Chloride (CAS # 7487-94-7): 10 lb RT

15.5. Massachusetts Right-to-Know Substance List

Mercuric Chloride (CAS # 7487-94-7): Extraordinarily hazardous

15.6. Pennsylvania Right-to-Know Hazardous Substances

Mercuric Chloride (CAS # 7487-94-7): "Environmental hazard" As Mercury compounds [RR-00138-7]

Mercuric Chloride (CAS # 7487-94-7): "Environmental hazard" As Mercury compounds [RR-00138-7];

"Environmental hazard" As Mercury inorganic compounds [RR-00569-6]

Mercuric Chloride (CAS # 7487-94-7): "Present" As Mercury compounds [RR-00138-7]

Mercuric Chloride (CAS # 7487-94-7): "Present" As Mercury compounds [RR-00138-7];

"Present" As Mercury inorganic compounds [RR-00569-6]

Mercuric Chloride (CAS # 7487-94-7): Environmental hazard

Mercuric Chloride (CAS # 7487-94-7): Present

Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]

Water (CAS # 7732-18-5): Present

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15.7. New Jersey Worker and Community Right-to-Know Components

Mercuric Chloride (CAS # 7487-94-7): "corrosive" As Mercury inorganic compounds [RR-00569-6]

Mercuric Chloride (CAS # 7487-94-7): "sn 1183" As Mercury inorganic compounds [RR-00569-6]

Mercuric Chloride (CAS # 7487-94-7): "SN 2414 500 lb TPQ (Category Code N458. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Mercury compounds [RR-00138-7]

Mercuric Chloride (CAS # 7487-94-7): carcinogen; mutagen

Mercuric Chloride (CAS # 7487-94-7): corrosive

Mercuric Chloride (CAS # 7487-94-7): sn 1170

Mercuric Chloride (CAS # 7487-94-7): SN 1170 500 lb TPQ

Mercuric Chloride (CAS # 7487-94-7): sn 1183

Mercuric Chloride (CAS # 7487-94-7): SN 2414 500 lb TPQ (Category Code N458. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

15.8. California Proposition 65

Mercuric Chloride (CAS # 7487-94-7): "developmental toxicity, 7/1/1990" As Mercury compounds [RR-00138-7]

Mercuric Chloride (CAS # 7487-94-7): developmental toxicity, 7/1/1990

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Mercuric Chloride (CAS # 7487-94-7): Present (DSL)

Water (CAS # 7732-18-5): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Mercuric Chloride (CAS # 7487-94-7): Present (ACTIVE)

Water (CAS # 7732-18-5): Present (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Mercuric Chloride (CAS # 7487-94-7): 231-299-8

Water (CAS # 7732-18-5): 231-791-2

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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Toxic if swallowed. May cause an allergic skin reaction. Causes serious eye damage. May cause genetic defects. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water). Rinse mouth. If skin irritation occurs: Get medical attention. Wash contaminated clothing before reuse. Collect spillage.

Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

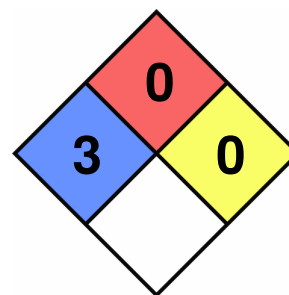
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health:	3
Flammability:	0
Reactivity:	0
Special Hazard:	



16.4. Document Revision

Last Revision Date: 2023-09-11

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.