



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Mercurous Nitrate TS

Product Number R4788000

Other Identifying Product Numbers R4788000-500C

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 412 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

Hazard Class	Category	Hazard Statements	Precautionary Statements
Acute Toxicity - Oral	Category 2	H300	P264,P270,P301+P310,P321,P330,P405,P501
Acute Toxicity - Dermal	Category 1	H310	P262,P264,P270,P280,P302+P352,P310,P321,P361+P364,P405,P501
Acute Toxicity - Inhalation (Dusts and Mists)	Category 2	H330	P260,P271,P284,P304+P340,P310,P320,P403+P233,P405,P501
Specific Target Organ Toxicity - Repeated Exposure	Category 2	H373	P260,P314,P501
Hazardous to the Aquatic Environment, Short-term (Acute)	Acute 2	H401	P273,P501
Hazardous to the Aquatic Environment, Long-term (Chronic)	Chronic 2	H411	P273,P391,P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

Hazard Number	Hazard Statement
H300+H310+H330	Fatal if swallowed, in contact with skin or if inhaled
H373	May cause damage to kidneys through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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Prevention

Precautionary Number	Precautionary Statement
P260	Do not breathe fumes or mist.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash hands, arms, and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P284	In case of inadequate ventilation wear respiratory protection.

Response

Precautionary Number	Precautionary Statement
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a poison center or doctor.
P314	Get medical advice or attention if you feel unwell.
P330	Rinse mouth.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P391	Collect spillage.

Storage

Precautionary Number	Precautionary Statement
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

Precautionary Number	Precautionary Statement
P501	Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

This product does not contain any ingredients of unknown acute toxicity.

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SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
water	Water	7732-18-5	85.42
bis(mercury(1+)) dinitrate dihydrate	Mercurous Nitrate Dihydrate; Mercury(I) nitrate dihydrate	14836-60-3	13.64
nitric acid	Nitric Acid	7697-37-2	0.94

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: May cause irritation, redness, pain, and tearing.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

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

Skin Contact: IF ON SKIN: Wash with plenty of water. May cause irritation. Effects may be similar to inhalation and ingestion. May cause dermatitis.

4.2. Most Important Symptoms and Effects, Acute and Delayed

May cause damage to kidneys through prolonged or repeated exposure DANGER! Toxic! Harmful if inhaled or absorbed through skin. Causes irritation to the skin, eyes, and respiratory tract. May cause allergic skin reaction. If ingested, give large quantity of water, do not induce vomiting. Vomiting may occur spontaneously. Call a physician immediately. Wash areas of contact with plenty of water for at least 15 minutes. Mercury compounds affect the kidneys and central nervous system. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation. Effects may be similar to inhalation and ingestion. May cause dermatitis. CHRONIC EFFECTS / CARCINOGENICITY: Mercury can accumulate in the body on prolonged exposure. May effect kidneys and central nervous system.

4.3. Immediate Medical Attention or Special Treatment Needed

Immediately call a poison center or doctor. 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. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire. Dry chemical or foam may suffice for small fires. For large fires, try fog or regular foam. Exercise caution if water is used (it may increase contamination of area).

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5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Not considered to be a fire or explosion hazard. Heat of reaction can accelerate the combustion of ordinary combustible materials.

5.3. Special Protective Equipment and Precautions for Firefighters

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

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.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

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

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U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Nitric Acid	7697-37-2	2 ppm TWA; 5 mg/m3 TWA

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Nitric Acid	7697-37-2	4 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Mercurous Nitrate Dihydrate	14836-60-3	"0.025 mg/m3 TWA (as Hg)" As Mercury inorganic forms [RR-00569-6]
Nitric Acid	7697-37-2	2 ppm TWA

8.2. Engineering Controls

No specific controls are needed. Normal room ventilation is adequate.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	liquid
Color:	Colorless
Odor:	Data not available.
Odor Threshold:	Data not available.
Melting/Freezing Point:	Data not available.
Boiling Point/Range:	Approximately 100°C
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available.
Flash Point:	Not flammable
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	Data not available.
Kinematic Viscosity:	Data not available.
Solubility:	miscible
Vapor Pressure:	Data not available.
Evaporation Rate:	Data not available.
Relative Density:	1.1
Relative Vapor Density:	Data not available.
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	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.

10.3. Conditions to Avoid and Incompatible Materials

Acetylene, Ethanol, Phosphine, Cyanide, Ferrocene, Sulfur, Isobutene, Aromatics, Hypophosphoric Acid.

10.4. Hazardous Decomposition Products

Will not occur.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Oral acute toxicity estimate (ATE): 36 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Mercurous Nitrate Dihydrate	14836-60-3	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)

Acute Toxicity - Dermal Exposure:

Dermal acute toxicity estimate (ATE): 36 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Mercurous Nitrate Dihydrate	14836-60-3	Dermal LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)

Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 342.5532 mg/L, 4 h(calculated); Inhalation acute toxicity estimate (ATE, dust or mist): 0.3666 mg/L, 4 h(calculated)

Chemical Name	CAS Number	Toxicity
Mercurous Nitrate Dihydrate	14836-60-3	Inhalation LC50 Acute Toxicity Estimate 0.05 mg/L 4 h (Source: ECHA)
Nitric Acid	7697-37-2	Inhalation LC50 Rat 3.22 mg/L 4 h (Source: WHMIS)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
Mercurous Nitrate Dihydrate	14836-60-3	Group 3 (Not Classified) - Monograph 58 [1993] As Mercury inorganic compounds
Nitric Acid	7697-37-2	Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
No data found.		

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
No data found.		

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11.3 Additional Toxicology Information:

Fatal if swallowed, in contact with skin or if inhaled. May cause damage to kidneys through prolonged or repeated exposure.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
	No data found.	None	None	

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: 500 mL

UN Number: UN2024

Proper Shipping Name: Mercury compounds, liquid, n.o.s. (Mercurous Nitrate, Mercury)

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



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

Sizes: 500 mL

UN Number: UN2024

Proper Shipping Name: Mercury compound, liquid, n.o.s. (Mercurous Nitrate, Mercury)

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 500 mL

UN Number: UN2024

Proper Shipping Name: MERCURY COMPOUNDS, LIQUID, N.O.S. (mercurous nitrate, mercury)

Hazard Class: 6.1

Packing Group: II

Hazard Label(s):



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SECTION 15: Regulatory Information

15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
No data found.		

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

Chemical Name	CAS Number	RQ	TPQ
Nitric Acid	7697-37-2	1000 lb TPQ	1000 lb EPCRA RQ

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

Chemical Name	CAS Number	Regulatory Information
Mercurous Nitrate Dihydrate	14836-60-3	"10 lb final RQ; 4.54 kg final RQ" As Mercurous nitrate [10415-75-5]
Nitric Acid	7697-37-2	1000 lb final RQ; 454 kg final RQ

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List	Regulatory Information
Mercurous Nitrate Dihydrate	14836-60-3	Emission Reporting	"not eligible for the de minimis exemption, listed under Chemical Category N458" As Mercury compounds [RR-00138-7]
Mercurous Nitrate Dihydrate	14836-60-3	Chemicals of Special Concern	"10 lb RT" As Mercury compounds [RR-00138-7]
Nitric Acid	7697-37-2	Emission Reporting	1.0 % de minimis concentration

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Mercurous Nitrate Dihydrate	14836-60-3	"Present" As Mercurous nitrate [10415-75-5]
Nitric Acid	7697-37-2	Extraordinarily hazardous

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15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Mercurous Nitrate Dihydrate	14836-60-3	"Environmental hazard" As Nitric acid, mercury(1+) salt [10415-75-5]; "Environmental hazard" As Mercury compounds [RR-00138-7]; "Environmental hazard" As Mercury inorganic compounds [RR-00569-6]
Nitric Acid	7697-37-2	Environmental hazard

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

Chemical Name	CAS Number	Regulatory Information
Mercurous Nitrate Dihydrate	14836-60-3	"sn 1181" As Mercurous nitrate [10415-75-5]; "sn 1183" As Mercury inorganic compounds [RR-00569-6]; "sn 3722" As Nitrate compounds [RR-01770-9]
Nitric Acid	7697-37-2	sn 1356

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Mercurous Nitrate Dihydrate	14836-60-3	"developmental toxicity, 7/1/1990" As Mercury compounds [RR-00138-7]

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

Chemical Name	CAS Number	List	Status
Mercurous Nitrate Dihydrate	14836-60-3	DSL	"Present" As Mercurous nitrate [10415-75-5]
Nitric Acid	7697-37-2	DSL	Present
Water	7732-18-5	DSL	Present

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

Chemical Name	CAS Number	Status
Mercurous Nitrate Dihydrate	14836-60-3	"Present (ACTIVE)" As Nitric acid, mercury(1+) salt (1:1) [10415-75-5]
Nitric Acid	7697-37-2	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)

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

Chemical Name	CAS Number	List	Number
Mercurous Nitrate Dihydrate	14836-60-3	EINECS	"233-886-4" As Dimercy dinitrate [10415-75-5]
Nitric Acid	7697-37-2	EINECS	231-714-2
Water	7732-18-5	EINECS	231-791-2

15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Mercurous Nitrate Dihydrate	14836-60-3	Present [35593]
Nitric Acid	7697-37-2	Present [35578]
Water	7732-18-5	Present [32224]

15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Mercurous Nitrate Dihydrate	14836-60-3	Annex 1	"Present [KE-11023]" As Mercurous nitrate [10415-75-5]
Mercurous Nitrate Dihydrate	14836-60-3	Annex 3	"Present (97-1-140)" As Mercury compounds [RR-00138-7]
Nitric Acid	7697-37-2	Annex 1	Present [KE-25911]
Water	7732-18-5	Annex 1	Present [KE-35400]

15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Mercurous Nitrate Dihydrate	14836-60-3	"(1)-435" As Dimercy dinitrate [10415-75-5]
Nitric Acid	7697-37-2	(1)-394
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)

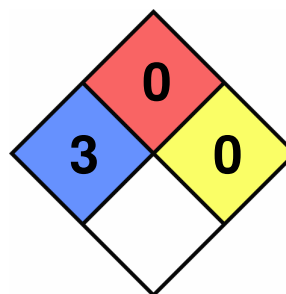
SECTION 16: Other Information

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16.1 National Fire Protection Associate (NFPA) Rating

Health: 3
Flammability: 0
Reactivity 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
2026-05-24

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.