RICCA CHEMICAL COMPANY®

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Mercuric Nitrate, 0.141 Normal, 0.0705 Molar, 1 mg = 5 mL Cl^-

Product Number 4740

Other Identifying Product Numbers 4740-1, 4740-16, 4740-32, 4740-5

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 4	H302	P264,P270,P301+P312,P330,P501
Acute Toxicity - Dermal	Category 3	H311	P280,P302+P352,P312,P321, P361+P364,P405,P501
Acute Toxicity - Inhalation (Dusts and Mists)	Category 4	H332	P261,P271,P304+P340,P312
Skin Corrosion / Irritation	Category 2	H315	P264,P280,P302+P352,P321, P332+P313,P362+P364
Serious Eye Damage / Eye Irritation	Category 2	H319	P264,P280,P305+P351+P338, P337+P313
Reproductive Toxicity	Category 2	H361	P201,P202,P280,P308+P313,P405, P501
Specific Target Organ Toxicity - Repeated Exposure	Category 1	H372	P260,P264,P270,P314,P501
Hazardous to the Aquatic Environment, Short-term (Acute)	Acute 3	H402	P273,P501
Hazardous to the Aquatic Environment, Long-term (Chronic)	Chronic 3	H412	P273,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
H302+H332	Harmful if swallowed or if inhaled
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to central nervous system, kidneys through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

Precautionary Statements:

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

Prevention

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 or mist.
P264	Wash hands, arms, and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 advice or attention.
P312	Call a poison center or doctor if you feel unwell.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice or attention.
P337+P313	If eye irritation persists: Get medical advice or attention.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.

Storage

Precautionary Number	Precautionary Statement
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

1.7 percent of this mixture consists of ingredient(s) of unknown acute oral and dermal toxicity.

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	95.91
mercury(2+) dinitrate hydrate	Mercuric Nitrate Monohydrate; Nitric acid, mercury(2+) salt, monohydrate	7783-34-8	2.44
nitric acid	Nitric Acid	7697-37-2	1.65

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

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.

Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. 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

Toxic in contact with skin 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

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).

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 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

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
Nitric Acid	7697-37-2	2 ppm TWA
Mercuric Nitrate Monohydrate	7783-34-8	"0.025 mg/m3 TWA (as Hg)" As Mercury inorganic forms [RR-00569-6]

8.2. Engineering Controls

Use only outdoors or in a well-ventilated area. 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:	Approximately 0°C
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:	1.02
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): 1065 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Mercuric Nitrate Monohydrate	7783-34-8	Oral LD50 Rat 26 mg/kg (Source: NLM_CIP) As Mercuric nitrate [10045-94-0]

Acute Toxicity - Dermal Exposure:

Dermal acute toxicity estimate (ATE): 204 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Mercuric Nitrate Monohydrate	7783-34-8	Dermal LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)

Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 195.1515 mg/L, 4 h(calculated); Inhalation acute toxicity estimate (ATE, dust or mist): 2.0492 mg/L, 4

Chemical Name	CAS Number	Toxicity
Nitric Acid	7697-37-2	Inhalation LC50 Rat 3.22 mg/L 4 h (Source: WHMIS)
Mercuric Nitrate Monohydrate	7783-34-8	Inhalation LC50 Acute Toxicity Estimate 0.05 mg/L 4 h (Source: ECHA)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
Nitric Acid	7697-37-2	Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic
Mercuric Nitrate Monohydrate	7783-34-8	Group 3 (Not Classified) - Monograph 58 [1993] As Mercury inorganic compounds

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.	

11.3 Additional Toxicology Information:

Harmful if swallowed or if inhaled. Toxic in contact with skin. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. Causes damage to central nervous system, 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: 1 L, 4 L, 20 L, 500 mL

UN Number: UN3287

Proper Shipping Name: Toxic Liquid, Inorganic, n.o.s. (Mercuric Nitrate)

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):

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

Sizes: 1 L, 4 L, 20 L, 500 mL

UN Number: UN3287

Proper Shipping Name: Toxic Liquid, Inorganic, n.o.s. (Mercuric Nitrate)

Hazard Class: 6.1

Packing Group: III

Hazard Label(s):

14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 L, 4 L, 20 L, 500 mL

UN Number: UN3287

Proper Shipping Name: TOXIC LIQUID, INORGANIC, N.O.S. (mercuric nitrate)

Hazard Class: 6.1

Packing Group: III

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
Nitric Acid	7697-37-2	1000 lb final RQ; 454 kg final RQ
Mercuric Nitrate Monohydrate	7783-34-8	"10 lb final RQ; 4.54 kg final RQ" As Mercuric nitrate [10045-94-0]

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

Chemical Name	CAS Number	List	Regulatory Information
Nitric Acid	7697-37-2	Emission Reporting	1.0 % de minimis concentration
Mercuric Nitrate Monohydrate	7783-34-8	Emission Reporting	"not eligible for the de minimis exemption, listed under Chemical Category N458" As Mercury compounds [RR-00138-7]
Mercuric Nitrate Monohydrate	7783-34-8	Chemicals of Special Concern	"10 lb RT" As Mercury compounds [RR-00138-7]

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Nitric Acid	7697-37-2	Extraordinarily hazardous
Mercuric Nitrate Monohydrate	7783-34-8	"Present" As Mercuric nitrate [10045-94-0]

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Nitric Acid	7697-37-2	Environmental hazard
Mercuric Nitrate Monohydrate	7783-34-8	"Environmental hazard" As Nitric acid, mercury(2+) salt [10045-94-0]; "Environmental hazard" As Mercury compounds [RR-00138-7]; "Environmental hazard" As Mercury inorganic compounds [RR-00569-6]

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

Chemical Name	CAS Number	Regulatory Information
Nitric Acid	7697-37-2	sn 1356
Mercuric Nitrate Monohydrate	7783-34-8	"sn 1173" As Mercuric nitrate [10045-94-0]; "sn 1183" As Mercury inorganic compounds [RR-00569-6]; "sn 3722" As Nitrate compounds [RR-01770-9]

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Mercuric Nitrate Monohydrate	7783-34-8	"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
Nitric Acid	7697-37-2	DSL	Present
Water	7732-18-5	DSL	Present
Mercuric Nitrate Monohydrate	7783-34-8	DSL	"Present" As Mercuric nitrate [10045-94-0]

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

Chemical Name	CAS Number	Status
Nitric Acid	7697-37-2	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)
Mercuric Nitrate Monohydrate	7783-34-8	"Present [12C] (ACTIVE)" As Nitric acid, mercury(2+) salt (2:1) [10045-94-0]

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
Nitric Acid	7697-37-2	EINECS	231-714-2
Water	7732-18-5	EINECS	231-791-2
Mercuric Nitrate Monohydrate	7783-34-8	EINECS	"233-152-3" As Mercury dinitrate [10045-94-0]

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

Chemical Name	CAS Number	Status
Nitric Acid	7697-37-2	Present [35578]
Water	7732-18-5	Present [32224]
Mercuric Nitrate Monohydrate	7783-34-8	Present [32246]

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

Chemical Name	CAS Number	List	Status
Nitric Acid	7697-37-2	Annex 1	Present [KE-25911]
Water	7732-18-5	Annex 1	Present [KE-35400]
Mercuric Nitrate Monohydrate	7783-34-8	Annex 1	"Present [KE-23127]" As Mercuric nitrate [10045-94-0]
Mercuric Nitrate Monohydrate	7783-34-8	Annex 3	"Present (97-1-140)" As Mercury compounds [RR-00138-7]

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

Chemical Name	CAS Number	MITI No.
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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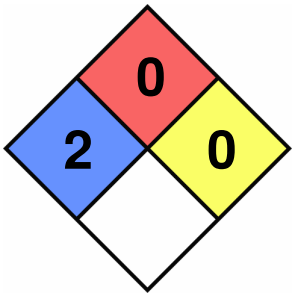
16.1 National Fire Protection Associate (NFPA) Rating

Health:	2
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.