



## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Mercuric Nitrate, 0.141 Normal, 0.0705 Molar, 1 mg = 5 mL Cl<sup>-</sup>

**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:** 448 West Fork Drive  
Arlington, TX 76012 USA

**Telephone:** 888-467-4222

#### 1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300  
CHEMTREC (International) 1+ 703-527-3887

# Safety Data Sheet

## SECTION 2: Hazard(s) Identification

### 2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

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

Hazard Class	Category	Hazard Statement	Precautionary Statements
Acute Toxicity - Oral	Category 3	H301	P264, P270, P301+P310, P321, P330, P405, P501
Acute Toxicity - Dermal	Category 3	H311	P280, P302+P352, P312, P321, P361, P405, P501
Acute Toxicity - Inhalation	Category 3	H331	P261, P271, P304+P340, P311, P321, P403+P233, P405, P501
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
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 2	H341	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 1	H370	P260, P264, P270, P307+P311, P321, 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 3	H402	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 3	H402	P273, P501

### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**



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### Hazard Statements:

Hazard Number	Hazard Statement
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H360	May damage fertility or the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H402	Harmful to aquatic life.



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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 dust, fumes or mist.
P261	Avoid breathing dust, fumes or mist.
P264	Wash arms, hands 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.
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.
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.
P307+P311	IF exposed: Call a POISON CENTER or physician.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P311	Call a POISON CENTER or physician.
P312	Call a POISON CENTER or physician if you feel unwell.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water immediately).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical attention.
P361	Take off immediately all contaminated clothing and wash it before reuse.
P362	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

### 2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458



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### 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 <sub>2</sub> O	18.01 g/mol	7732-18-5	95.81%
Mercuric Nitrate Monohydrate	Hg(NO <sub>3</sub> ) <sub>2</sub> ·H <sub>2</sub> O	Data not available.	7783-34-8	2.44%
Nitric Acid	HNO <sub>3</sub>	63.01 g/mol	7697-37-2	1.75%

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

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

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

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

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. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water 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

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

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## 5.3. Special Protective Equipment 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. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Mercuric Nitrate Monohydrate (7783-34-8)	TLV-TWA	USA	0.025 mg/m <sup>3</sup> TWA (as Hg)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	2 ppm TWA 5 mg/m <sup>3</sup> TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	4 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	2 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

### 8.2. Exposure Controls

**Engineering Controls:** Use only outdoors or in a well-ventilated area. 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.

**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.



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### 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:** Data not available.

**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:** 1.02

**Solubility:** Miscible

**Partition Coefficient (n-Octanol/Water):** 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.

#### 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:

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 immediately). Rinse mouth. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

##### Acute Toxicity - Dermal Exposure:

Toxic in contact with skin. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Specific treatment (Wash areas of contact with water immediately). Take off immediately all contaminated clothing and wash it before reuse. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

##### Acute Toxicity - Inhalation Exposure:

Toxic if inhaled. Avoid breathing dust, fumes or mist. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

##### Acute Toxicity - Other Information:

LD50, Oral, Rat: 26 mg/kg (Mercuric Nitrate); LD50, Dermal, Rat: 75 mg/kg (Mercuric Nitrate); LD50, Oral, Human: (Nitric Acid) 430 mg/kg, Details of toxic effects not reported other than lethal dose value.

##### Skin Corrosion and Irritation:

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water immediately). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

##### 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 dust, fumes or mist. 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 immediately). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

##### Germ Cell Mutagenicity:

Suspected of causing 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.



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**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

May damage 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:**

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Specific Target Organ Toxicity from Repeated Exposure:**

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. 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**

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Harmful to aquatic life. Avoid release to the environment. 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)

**UN Number:** UN3287

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

**Hazard Class:** 6.1

**Packing Group:** III

**Hazard Placard Labels:**



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

**UN Number:** UN3287

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

**Hazard Class:** 6.1

**Packing Group:** III

**Hazard Placard Labels:**



### 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

Nitric Acid (CAS # 7697-37-2): 1000 lb EPCRA RQ

Nitric Acid (CAS # 7697-37-2): 1000 lb TPQ

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

Nitric Acid (CAS # 7697-37-2): 1000 lb final RQ; 454 kg final RQ

Mercuric Nitrate Monohydrate (CAS # 7783-34-8): 10 lb final RQ; 4.54 kg final RQ

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

Nitric Acid (CAS # 7697-37-2): 1.0 % de minimis concentration

Mercuric Nitrate Monohydrate (CAS # 7783-34-8): 1.0 % Supplier notification limit (listed under Chemical Category N458)

Mercuric Nitrate Monohydrate (CAS # 7783-34-8): 10 lb RT



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### 15.5. Massachusetts Right-to-Know Substance List

Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): Present

### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Nitric Acid (CAS # 7697-37-2): Environmental hazard  
Nitric Acid (CAS # 7697-37-2): Present  
Water (CAS # 7732-18-5): Present  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): Environmental hazard  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): Present

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

Nitric Acid (CAS # 7697-37-2): corrosive; reactive - second degree  
Nitric Acid (CAS # 7697-37-2): sn 1356  
Nitric Acid (CAS # 7697-37-2): SN 1356 TPQ: 500 lb  
Nitric Acid (CAS # 7697-37-2): sn 3722  
Nitric Acid (CAS # 7697-37-2): SN 3722 TPQ: 500 lb (water dissociable, Category Code N511)  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): corrosive  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): sn 1173  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): sn 1183  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): SN 2414 TPQ: 500 lb (Category Code N458. Includes any unique chemical substance that contains the named metal as part of that chemical structure)  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): sn 3722  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): SN 3722 TPQ: 500 lb (water dissociable, Category Code N511)

### 15.8. California Proposition 65

Mercuric Nitrate Monohydrate (CAS # 7783-34-8): developmental toxicity, initial date 7/1/90

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

Nitric Acid (CAS # 7697-37-2): Present  
Water (CAS # 7732-18-5): Present  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): Present

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

Nitric Acid (CAS # 7697-37-2): Present  
Water (CAS # 7732-18-5): Present  
Mercuric Nitrate Monohydrate (CAS # 7783-34-8): Present

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

Not listed.

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## SECTION 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

Toxic if swallowed. Toxic in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Toxic if inhaled. Suspected of causing genetic defects. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Harmful to aquatic life.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. 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 INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water immediately). Rinse mouth. If skin irritation occurs: Get medical attention. Take off immediately all contaminated clothing and wash it before reuse. Take off contaminated clothing and wash it before reuse.

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

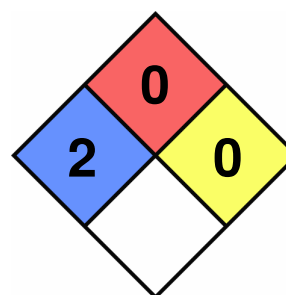
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

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

Not Applicable.

### 16.3. National Fire Protection Association (NFPA) Rating

**Health:** 2  
**Flammability:** 0  
**Reactivity:** 0  
**Special Hazard:**



## Safety Data Sheet

### 16.4. Document Revision

**Last Revision Date:** 5/1/2015

### 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.