



## Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation** 5 ppm Mixed Metals (Ni, Ag, Cu, Cr) in 2 % Nitric Acid

**Product Number** RICP4050

**Other Identifying Product Numbers** RICP4050-500A

#### 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                         |
|-------------------------------------|------------|-------------------|--------------------------------------------------|
| Skin Corrosion / Irritation         | Category 2 | H315              | P264,P280,P302+P352,P321,<br>P332+P313,P362+P364 |
| Serious Eye Damage / Eye Irritation | Category 2 | H319              | P264,P280,P305+P351+P338, P337+P313              |

#### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Warning**

Hazard Statements:

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

| Hazard Number | Hazard Statement              |
|---------------|-------------------------------|
| H315          | Causes skin irritation        |
| H319          | Causes serious eye irritation |

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                               |
|----------------------|-------------------------------------------------------|
| P264                 | Wash hands, arms, and face thoroughly after handling. |
| P280                 | Wear protective gloves and eye protection.            |

### Response

| Precautionary Number | Precautionary Statement                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| P302+P352            | IF ON SKIN: Wash with plenty of 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. |
| P332+P313            | If skin irritation occurs: Get medical advice or attention.                                                                      |
| P337+P313            | If eye irritation persists: Get medical advice or attention.                                                                     |
| P362+P364            | Take off contaminated clothing and wash it before reuse.                                                                         |

### 2.3. Hazards not Otherwise Classified

No other hazards identified.

### 2.4. Ingredients of Unknown Acute Toxicity

2 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  | 98.03   |
| nitric acid                         | Nitric Acid                                                        | 7697-37-2  | 1.96    |
| chromium(3+) trinitrate nonahydrate | Chromium Nitrate Nonahydrate;<br>Chromium(III) nitrate nonahydrate | 7789-02-8  | < 0.1   |
| nickel                              | Nickel                                                             | 7440-02-0  | < 0.1   |
| silver                              | Silver                                                             | 7440-22-4  | < 0.1   |
| copper                              | Copper                                                             | 7440-50-8  | < 0.1   |

## 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.

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**Ingestion:** Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

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

**Skin Contact:** IF ON SKIN: Wash with plenty of water. May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

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

Causes skin irritation CAUTION! Mildly corrosive liquid. Contains a trace amount of a known carcinogen. Avoid contact with skin, eyes, and clothing. If swallowed, dilute with water and call a physician. Wash areas of contact with plenty of water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

## 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. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing Media

Use water or water spray.

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

Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can react with metals to release flammable hydrogen gas. May react explosively with combustible organic or readily oxidizable materials such as: alcohols, turpentine, charcoal, organic refuse, metal powder, hydrogen sulfide, etc.

### 5.3. Special Protective Equipment and Precautions for Firefighters

Use protective clothing and 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

Absorb with suitable material and dispose of in accordance with local regulations.

## SECTION 7: Handling and Storage

### 7.1. Precautions for Safe Handling and Storage Conditions

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As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials.

### 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                                                              |
|------------------------------|------------|-----------------------------------------------------------------------------|
| Nickel                       | 7440-02-0  | 1 mg/m <sup>3</sup> TWA                                                     |
| Silver                       | 7440-22-4  | 0.01 mg/m <sup>3</sup> TWA                                                  |
| Copper                       | 7440-50-8  | 0.1 mg/m <sup>3</sup> TWA (fume); 1 mg/m <sup>3</sup> TWA (dust and mist)   |
| Nitric Acid                  | 7697-37-2  | 2 ppm TWA; 5 mg/m <sup>3</sup> TWA                                          |
| Chromium Nitrate Nonahydrate | 7789-02-8  | "0.5 mg/m <sup>3</sup> TWA (as Cr)" As Chromium(III) compounds [RR-03889-1] |

##### 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                                           |
|---------------|------------|----------------------------------------------------------|
| Nickel        | 7440-02-0  | 1.5 mg/m <sup>3</sup> TWA (inhalable particulate matter) |
| Silver        | 7440-22-4  | 0.1 mg/m <sup>3</sup> TWA (dust and fume)                |
| Copper        | 7440-50-8  | 0.2 mg/m <sup>3</sup> TWA (fume)                         |
| Nitric Acid   | 7697-37-2  | 2 ppm TWA                                                |

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## 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.

## 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:** < 1

**Kinematic Viscosity:** Data not available.

**Solubility:** miscible

**Vapor Pressure:** Data not available.

**Evaporation Rate:** Data not available.

**Relative Density:** 1.01

**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.

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### 10.2. Possibility of Hazardous Reactions

Data not available.

### 10.3. Conditions to Avoid and Incompatible Materials

Strong bases, metallic powders, Carbides, Hydrogen Sulfide, Turpentine and combustible organics.

### 10.4. Hazardous Decomposition Products

Will not occur.

## SECTION 11: Toxicological Information

### 11.1. Information on Toxicological Effects

#### Acute Toxicity - Oral Exposure:

Not acutely toxic.

| Chemical Name                | CAS Number | Toxicity                                                                    |
|------------------------------|------------|-----------------------------------------------------------------------------|
| Nickel                       | 7440-02-0  | Oral LD50 Rat >9000 mg/kg (powder suspended in mineral oil, Source: EU_RAR) |
| Silver                       | 7440-22-4  | Oral LD50 Rat >2000 mg/kg (no deaths occurred, Source: ECHA)                |
| Copper                       | 7440-50-8  | Oral LD50 Mouse 413 mg/kg (Source: Canada_WHMIS)                            |
| Chromium Nitrate Nonahydrate | 7789-02-8  | Oral LD50 Rat 3250 mg/kg (Source: NLM_CIP)                                  |

#### Acute Toxicity - Dermal Exposure:

No information found.

| Chemical Name | CAS Number | Toxicity                                                                                                             |
|---------------|------------|----------------------------------------------------------------------------------------------------------------------|
| Silver        | 7440-22-4  | Dermal LD50 rat >2000 mg/kg (nanoparticulate silver dispersed in 1% Citric acid; no deaths occurred, Source: EU_CLH) |

#### Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 164.2857 mg/L, 4 h(calculated)

| Chemical Name | CAS Number | Toxicity                                                                        |
|---------------|------------|---------------------------------------------------------------------------------|
| Nickel        | 7440-02-0  | Inhalation LC50 Rat >10.2 mg/L 1 h (no deaths occurred, dust, Source: EU_RAR)   |
| Silver        | 7440-22-4  | Inhalation LC50 Rat >5.16 mg/L 4 h (no deaths occurred, dust, Source: ECHA_API) |
| Copper        | 7440-50-8  | Inhalation LC50 Rat >5.11 mg/L 4 h (no deaths occurred, dust, 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)

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| Chemical Name                | CAS Number | Classification                                                                                                                               |
|------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Nickel                       | 7440-02-0  | Group 2B (Possibly Carcinogenic to Humans) - Monograph 49 [1990]; Supplement 7 [1987]                                                        |
| Nitric Acid                  | 7697-37-2  | Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic                                |
| Chromium Nitrate Nonahydrate | 7789-02-8  | Group 3 (Not Classified) - Monograph 49 [1990]; Supplement 7 [1987]; Monograph 23 [1980]; Monograph 2 [1973] As Chromic nitrate [13548-38-4] |

### National Toxicology Program (NTP)

| Chemical Name | CAS Number | Classification                                                                                      |
|---------------|------------|-----------------------------------------------------------------------------------------------------|
| Nickel        | 7440-02-0  | Reasonably Anticipated To Be A Human Carcinogen (listed under Nickel compounds and metallic nickel) |

### U.S. OSHA specifically regulated carcinogens

| Chemical Name  | CAS Number | Classification |
|----------------|------------|----------------|
| No data found. |            |                |

### 11.3 Additional Toxicology Information:

Causes skin irritation. Causes serious eye irritation.

## SECTION 12: Ecological Information

### 12.1. Ecotoxicity

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| Chemical Name | CAS Number | Species          | Exposure | Toxicity                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|------------|------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nickel        | 7440-02-0  | Freshwater Algae | Acute    | EC50 72 h Pseudokirchneriella subcapitata 0.18 mg/L (IUCLID); EC50 96 h Pseudokirchneriella subcapitata 0.174 - 0.311 mg/L [static] (EPA)                                                                                                                                                                                                                                                                                                                                      |
| Copper        | 7440-50-8  | Freshwater Algae | Acute    | EC50 72 h Pseudokirchneriella subcapitata 0.0426 - 0.0535 mg/L [static] (EPA); EC50 96 h Pseudokirchneriella subcapitata 0.031 - 0.054 mg/L [static] (EPA)                                                                                                                                                                                                                                                                                                                     |
| Nickel        | 7440-02-0  | Freshwater Fish  | Acute    | LC50 96 h Brachydanio rerio >100 mg/L (IUCLID); LC50 96 h Cyprinus carpio 1.3 mg/L [semi-static] (EPA); LC50 96 h Cyprinus carpio 10.4 mg/L [static] (EPA)                                                                                                                                                                                                                                                                                                                     |
| Silver        | 7440-22-4  | Freshwater Fish  | Acute    | LC50 96 h Pimephales promelas 0.00155 - 0.00293 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 0.0062 mg/L [flow-through] (EPA); LC50 96 h Lepomis macrochirus 0.064 mg/L [static] (EPA)                                                                                                                                                                                                                                                                                   |
| Copper        | 7440-50-8  | Freshwater Fish  | Acute    | LC50 96 h Pimephales promelas 0.0068 - 0.0156 mg/L (EPA); LC50 96 h Pimephales promelas <0.3 mg/L [static] (EPA); LC50 96 h Pimephales promelas 0.2 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 0.052 mg/L [flow-through] (EPA); LC50 96 h Lepomis macrochirus 1.25 mg/L [static] (EPA); LC50 96 h Cyprinus carpio 0.3 mg/L [semi-static] (EPA); LC50 96 h Cyprinus carpio 0.8 mg/L [static] (EPA); LC50 96 h Poecilia reticulata 0.112 mg/L [flow-through] (EPA) |
| Nickel        | 7440-02-0  | Water Flea       | Acute    | EC50 48 h Daphnia magna >100 mg/L (IUCLID); EC50 48 h Daphnia magna 1 mg/L [Static] (EPA)                                                                                                                                                                                                                                                                                                                                                                                      |
| Silver        | 7440-22-4  | Water Flea       | Acute    | EC50 48 h Daphnia magna 0.00024 mg/L [Static] (EPA)                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Copper        | 7440-50-8  | Water Flea       | Acute    | EC50 48 h Daphnia magna 0.03 mg/L [Static] (EPA)                                                                                                                                                                                                                                                                                                                                                                                                                               |

## 12.2. Persistence and Degradability

Data not available.

## 12.3. Bioaccumulative Potential

Data not available.

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## 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.

## SECTION 14: Transportation Information

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

Not regulated according to DOT regulations.

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

Not regulated according to IATA Dangerous Goods Regulations.



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### 14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG regulations.

## SECTION 15: Regulatory Information

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### 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                                                                                                                                                                                                                                                                                             |
|---------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nickel        | 7440-02-0  | 100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)  |
| Silver        | 7440-22-4  | 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)  |
| Copper        | 7440-50-8  | 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm) |
| Nitric Acid   | 7697-37-2  | 1000 lb final RQ; 454 kg final RQ                                                                                                                                                                                                                                                                                  |

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

| Chemical Name                   | CAS Number | List               | Regulatory Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------|------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nickel                          | 7440-02-0  | Emission Reporting | 0.1 % de minimis concentration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Silver                          | 7440-22-4  | Emission Reporting | 1.0 % de minimis concentration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Copper                          | 7440-50-8  | Emission Reporting | 1.0 % de minimis concentration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Nitric Acid                     | 7697-37-2  | Emission Reporting | 1.0 % de minimis concentration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | Emission Reporting | <p>"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0];</p> <p>"1.0 % de minimis concentration (includes any unique chemical substance that contains Chromium as part of that chemical's infrastructure except for Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the Chromite ore processing residue (COPR), no de minimis concentration has been assigned to this chemical category, listed under Chemical Category N090)" As Chromium(III) compounds [RR-03889-1]</p> |

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

| Chemical Name | CAS Number | Regulatory Information                |
|---------------|------------|---------------------------------------|
| Nickel        | 7440-02-0  | Carcinogen; Extraordinarily hazardous |
| Silver        | 7440-22-4  | Present                               |
| Copper        | 7440-50-8  | Present                               |
| Nitric Acid   | 7697-37-2  | Extraordinarily hazardous             |

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

| Chemical Name                   | CAS Number | Regulatory Information                                    |
|---------------------------------|------------|-----------------------------------------------------------|
| Nickel                          | 7440-02-0  | Environmental hazard; Special hazardous substance         |
| Silver                          | 7440-22-4  | Environmental hazard                                      |
| Copper                          | 7440-50-8  | Environmental hazard (dust; fume; metal)                  |
| Nitric Acid                     | 7697-37-2  | Environmental hazard                                      |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | "Environmental hazard" As Chromium compounds [RR-00634-8] |

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

| Chemical Name                   | CAS Number | Regulatory Information                                                                                                                                                                            |
|---------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nickel                          | 7440-02-0  | sn 1341                                                                                                                                                                                           |
| Silver                          | 7440-22-4  | sn 1669                                                                                                                                                                                           |
| Copper                          | 7440-50-8  | sn 0528                                                                                                                                                                                           |
| Nitric Acid                     | 7697-37-2  | sn 1356                                                                                                                                                                                           |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | "sn 0435" As Chromium nitrate [13548-38-4];<br>"sn 2245" As Chromium compounds [RR-00634-8];<br>"sn 3722" As Nitrate compounds [RR-01770-9];<br>"sn 2870" As Chromium(III) compounds [RR-03889-1] |

## 15.08. California Proposition 65

| Chemical Name | CAS Number | Regulatory Information           |
|---------------|------------|----------------------------------|
| Nickel        | 7440-02-0  | carcinogen, 10/1/1989 (metallic) |

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

| Chemical Name                   | CAS Number | List | Status                                     |
|---------------------------------|------------|------|--------------------------------------------|
| Nickel                          | 7440-02-0  | DSL  | Present                                    |
| Silver                          | 7440-22-4  | DSL  | Present                                    |
| Copper                          | 7440-50-8  | DSL  | Present                                    |
| Nitric Acid                     | 7697-37-2  | DSL  | Present                                    |
| Water                           | 7732-18-5  | DSL  | Present                                    |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | DSL  | "Present" As Chromium nitrate [13548-38-4] |

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

| Chemical Name                   | CAS Number | Status                                                                  |
|---------------------------------|------------|-------------------------------------------------------------------------|
| Nickel                          | 7440-02-0  | Present (ACTIVE)                                                        |
| Silver                          | 7440-22-4  | Present (ACTIVE)                                                        |
| Copper                          | 7440-50-8  | Present (ACTIVE)                                                        |
| Nitric Acid                     | 7697-37-2  | Present (ACTIVE)                                                        |
| Water                           | 7732-18-5  | Present [XU] (ACTIVE)                                                   |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | "Present (ACTIVE)" As Nitric acid, chromium(3+) salt (3:1) [13548-38-4] |

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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                                          |
|---------------------------------|------------|--------|-------------------------------------------------|
| Nickel                          | 7440-02-0  | EINECS | 231-111-4                                       |
| Silver                          | 7440-22-4  | EINECS | 231-131-3                                       |
| Copper                          | 7440-50-8  | EINECS | 231-159-6                                       |
| Nitric Acid                     | 7697-37-2  | EINECS | 231-714-2                                       |
| Water                           | 7732-18-5  | EINECS | 231-791-2                                       |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | EINECS | "236-921-1" As Chromium trinitrate [13548-38-4] |

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

| Chemical Name                   | CAS Number | Status          |
|---------------------------------|------------|-----------------|
| Nickel                          | 7440-02-0  | Present [25343] |
| Silver                          | 7440-22-4  | Present [40861] |
| Copper                          | 7440-50-8  | Present [34399] |
| Nitric Acid                     | 7697-37-2  | Present [35578] |
| Water                           | 7732-18-5  | Present [32224] |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | Present [21184] |

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

| Chemical Name                   | CAS Number | List    | Status                                                |
|---------------------------------|------------|---------|-------------------------------------------------------|
| Nickel                          | 7440-02-0  | Annex 1 | Present [KE-25818]                                    |
| Silver                          | 7440-22-4  | Annex 1 | Present [KE-31261]                                    |
| Copper                          | 7440-50-8  | Annex 1 | Present [KE-08896]                                    |
| Nitric Acid                     | 7697-37-2  | Annex 1 | Present [KE-25911]                                    |
| Water                           | 7732-18-5  | Annex 1 | Present [KE-35400]                                    |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | Annex 1 | "Present [KE-06019]" As Chromium nitrate [13548-38-4] |

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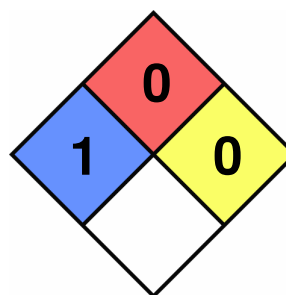
### 15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

| Chemical Name                   | CAS Number | MITI No.                                         |
|---------------------------------|------------|--------------------------------------------------|
| Nickel                          | 7440-02-0  | - (exempt)                                       |
| Silver                          | 7440-22-4  | - (exempt)                                       |
| Copper                          | 7440-50-8  | - (exempt)                                       |
| Nitric Acid                     | 7697-37-2  | (1)-394                                          |
| Water                           | 7732-18-5  | - (listed on Japanese Pharmacopoeia 8th Edition) |
| Chromium Nitrate<br>Nonahydrate | 7789-02-8  | (1)-281                                          |

## SECTION 16: Other Information

### 16.1 National Fire Protection Associate (NFPA) Rating

**Health:** 1  
**Flammability:** 0  
**Reactivity:** 0  
**Special Hazard:**



### 16.2 Document Revision

**Last Revision Date:**  
 2026-05-07

## 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.