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** Tin ICP Standard, 10,000 ppm Sn in 5% $HNO_3$

**Product Number** PSN10KN

**Other Identifying Product Numbers** PSN10KN-100, PSN10KN-50

### 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 |
| Corrosive to the Respiratory Tract | Corrosive | | |
| Skin Corrosion / Irritation | Category 1 | H314 | P260,P264,P280,P301+P330+P331, P303+P361+P353,P363,P304+P340, P310,P321,P305+P351+P338,P405, P501 |
| Serious Eye Damage / Eye Irritation | Category 1 | H318 | P280,P305+P351+P338,P310 |
| Corrosive to Metals | Category 1 | H290 | P234,P390,P406 |

### 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 |
|---|---|
| H290 | May be corrosive to metals |
| H302 | Harmful if swallowed |
| H314 | Causes severe skin burns and eye damage |
| | Corrosive to the respiratory tract |

**Precautionary Statements:**

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

**Prevention**

| Precautionary Number | Precautionary Statement |
|---|---|
| P234 | Keep only in original packaging. |
| 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. |
| 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. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| 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. |
| P310 | Immediately call a poison center or doctor. |
| P321 | Specific treatment: Treat with calcium gluconate gel. |
| P330 | Rinse mouth. |
| P363 | Wash contaminated clothing before reuse. |
| P390 | Absorb spillage to prevent material damage. |

**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

5.1 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 5.7 percent of this mixture consists of ingredient(s) of unknown acute dermal 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 | 93.31 |
| nitric acid | Nitric Acid | 7697-37-2 | 5.06 |
| tin | Tin | 7440-31-5 | 0.96 |
| fluorane | Hydrofluoric Acid | 7664-39-3 | 0.67 |

## 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. Do not induce vomiting. Call a physician if necessary.

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

**Skin Contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Skin contact may cause burns which may not be immediately apparent or painful. The burns can be bone deep.

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

Harmful if swallowed Corrosive Liquid. May be fatal if swallowed. Avoid contact with skin, eyes, and clothing. Avoid breathing vapor. If swallowed, do not induce vomiting. Dilute with water and call a physician. Wash areas of contact with plenty of water. Skin contact may cause burns which may not be immediately apparent or painful. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: Skin contact may cause burns which may not be immediately apparent or painful. The burns can be bone deep. CHRONIC EFFECTS / CARCINOGENICITY: Chronic exposures may cause mottling of teeth and bone damage and fluorosis. Symptoms of fluorosis include brittle bones, weight loss, anemia, calcified ligaments, general ill health and joint stiffness.

### 4.3. Immediate Medical Attention or Special Treatment Needed

Immediately call a poison center or doctor. Specific treatment: Treat with calcium gluconate gel. 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. Immediately flush with plenty of water for at least 15 minutes. Remove any contaminated clothing. Wash with soap and water, then flush again with water. Call a physician if irritation develops. Dilute 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.

### 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

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 |
|---|---|---|
| Tin | 7440-31-5 | "2 mg/m3 TWA (except oxides, as Sn)" As Tin, inorganic compounds [RR-00043-1] |
| Hydrofluoric Acid | 7664-39-3 | 3 ppm TWA (as F) |
| 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)**

| Chemical Name | CAS Number | Exposure Limit |
|---|---|---|
| Hydrofluoric Acid | 7664-39-3 | 2 ppm Ceiling (as F) |

**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 |
|---|---|---|
| Tin | 7440-31-5 | 2 mg/m3 TWA (inhalable particulate matter) |
| Hydrofluoric Acid | 7664-39-3 | 0.5 ppm TWA (as F) |
| 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:** | < 2 |
| **Kinematic Viscosity:** | Data not available. |
| **Solubility:** | miscible |
| **Vapor Pressure:** | Data not available. |
| **Evaporation Rate:** | Data not available. |
| **Relative Density:** | 1.04 |
| **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

Keep only in original packaging. Strong bases, metallic powders.

### 10.4. Hazardous Decomposition Products

Will not occur.

## SECTION 11: Toxicological Information

### 11.1. Information on Toxicological Effects

**Acute Toxicity - Oral Exposure:**

Oral acute toxicity estimate (ATE): 746 mg/kg(calculated)

| Chemical Name | CAS Number | Toxicity |
|---|---|---|
| Tin | 7440-31-5 | Oral LD50 Rat >2000 mg/kg (Source: Canada_WHMIS) |
| Hydrofluoric Acid | 7664-39-3 | Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: Canada_WHMIS) |

**Acute Toxicity - Dermal Exposure:**

No information found.

| Chemical Name | CAS Number | Toxicity |
|---|---|---|
| Tin | 7440-31-5 | Dermal LD50 Rat >2000 mg/kg (Source: ECHA_API) |

**Acute Toxicity - Inhalation Exposure:**

Inhalation acute toxicity estimate (ATE, vapor): 41.3303 mg/L, 4 h(calculated)

| Chemical Name | CAS Number | Toxicity |
|---|---|---|
| Tin | 7440-31-5 | Inhalation LC50 Rat >4.75 mg/L 4 h (no deaths occurred, dust, Source: ECHA_API) |
| Hydrofluoric Acid | 7664-39-3 | Inhalation LC50 Rat 0.79 mg/L 1 h (vapor, Source: JAPAN_GHS) |
| 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 |
|---|---|---|
| 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. | |

### 11.3 Additional Toxicology Information:

Harmful if swallowed. Causes severe skin burns and eye damage. Corrosive to the respiratory tract.

## SECTION 12: Ecological Information

### 12.1. Ecotoxicity

| Chemical Name | CAS Number | Species | Exposure | Toxicity |
|---|---|---|---|---|
| Hydrofluoric Acid | 7664-39-3 | Water Flea | Acute | EC50 48 h Daphnia species 270 mg/L (IUCLID) |

### 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:** 50 mL, 100 mL

**UN Number:** UN3264

**Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid, Hydrofluoric Acid)

**Hazard Class:** 8

**Packing Group:** II

**Hazard Label(s):**




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

**Sizes:** 50 mL, 100 mL

**UN Number:** UN3264

**Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid, Hydrofluoric Acid)

**Hazard Class:** 8

**Packing Group:** II

**Hazard Label(s):**




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

**Sizes:** 50 mL, 100 mL

**UN Number:** UN3264

**Proper Shipping Name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid, hydrofluoric acid)

**Hazard Class:** 8

**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 |
|---|---|---|---|
| Hydrofluoric Acid | 7664-39-3 | 100 lb TPQ | 100 lb EPCRA RQ |
| 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 |
|---|---|---|
| Hydrofluoric Acid | 7664-39-3 | 100 lb final RQ; 45.4 kg final RQ |
| 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 |
|---|---|---|---|
| Hydrofluoric Acid | 7664-39-3 | Emission Reporting | 1.0 % de minimis concentration |
| 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 |
|---|---|---|
| Tin | 7440-31-5 | Present |
| Hydrofluoric Acid | 7664-39-3 | Extraordinarily hazardous |
| Nitric Acid | 7697-37-2 | Extraordinarily hazardous |

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

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Tin | 7440-31-5 | Present |
| Hydrofluoric Acid | 7664-39-3 | Environmental hazard |
| Nitric Acid | 7697-37-2 | Environmental hazard |

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

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Tin | 7440-31-5 | sn 1858 |
| Hydrofluoric Acid | 7664-39-3 | sn 3759 |
| Nitric Acid | 7697-37-2 | sn 1356 |

### 15.08. California Proposition 65

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| | | No data found. |

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

| Chemical Name | CAS Number | List | Status |
|---|---|---|---|
| Tin | 7440-31-5 | DSL | Present |
| Hydrofluoric Acid | 7664-39-3 | DSL | Present |
| 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 |
|---|---|---|
| Tin | 7440-31-5 | Present (ACTIVE) |
| Hydrofluoric Acid | 7664-39-3 | Present (ACTIVE) |
| Nitric Acid | 7697-37-2 | Present (ACTIVE) |
| Water | 7732-18-5 | Present [XU] (ACTIVE) |

### 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 |
|---|---|---|---|
| Tin | 7440-31-5 | EINECS | 231-141-8 |
| Hydrofluoric Acid | 7664-39-3 | EINECS | 231-634-8 |
| 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 |
|---|---|---|
| Tin | 7440-31-5 | Present [35345] |
| Hydrofluoric Acid | 7664-39-3 | Present [27221] |
| 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 |
|---|---|---|---|
| Tin | 7440-31-5 | Annex 1 | Present [KE-33838] |
| Hydrofluoric Acid | 7664-39-3 | Annex 1 | Present [KE-20198] |
| Nitric Acid | 7697-37-2 | Annex 1 | Present [KE-25911] |
| Water | 7732-18-5 | Annex 1 | Present [KE-35400] |

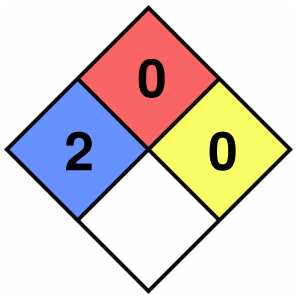
### 15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

| Chemical Name | CAS Number | MITI No. |
|---|---|---|
| Tin | 7440-31-5 | - (exempt) |
| Hydrofluoric Acid | 7664-39-3 | (1)-306 |
| Nitric Acid | 7697-37-2 | (1)-394 |
| Water | 7732-18-5 | - (listed on Japanese Pharmacopoeia 8th Edition) |

## SECTION 16: Other Information

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

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



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### 16.2 Document Revision

**Last Revision Date:**
2026-05-23

## 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.