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** Fluoride Standard, 4 ppm $F^-$ (Premixed with TISAB)

**Product Number** R3163800

**Other Identifying Product Numbers** R3163800-4A

### 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 |

# Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

## 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, P332+P313,P362+P364 |
| Serious Eye Damage / Eye Irritation | Category 1 | H318 | P280,P305+P351+P338,P310 |

### 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 |
|---|---|
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |

**Precautionary Statements:**

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

**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. |
| P310 | Immediately call a poison center or doctor. |
| P332+P313 | If skin irritation occurs: 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

1.9 percent of this mixture consists of ingredient(s) of unknown acute oral and inhalation toxicity. 4.7 percent of this mixture consists of ingredient(s) of unknown acute 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 | 92.49 |
| acetic acid | Acetic Acid; Ethanoic acid | 64-19-7 | 2.85 |
| sodium chloride | Sodium Chloride; Salt | 7647-14-5 | 2.76 |
| sodium hydroxide | Sodium Hydroxide; caustic soda | 1310-73-2 | 1.70 |
| 2-[[(1R,2R)-2-[bis(carboxymethyl)amino]cyclohexyl]-(carboxymethyl)amino]acetic acid | 1,2-Cyclohexylenediamine Tetraacetic Acid (CDTA); trans-Cyclohexane-1,2-dinitrilotetraacetic acid | 13291-61-7 | 0.19 |
| sodium fluoride | Sodium Fluoride | 7681-49-4 | < 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.

**Ingestion:** Dilute with water or milk. 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.

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

Causes skin irritation This product may cause irritation to areas of contact. Handle with care. Wash areas of contact with water immediately. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain.

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

Immediately call a poison center or doctor. Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Call a physician if necessary.

## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

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

Not considered to be a fire or explosion hazard.

### 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 (vermiculite, clay, paper towels, etc.). Treat the solid residue as normal refuse. Liquid may be flushed to the sewer with plenty of water.

## SECTION 7: Handling and Storage

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

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 |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | 2 mg/m3 TWA |
| Acetic Acid | 64-19-7 | 10 ppm TWA; 25 mg/m3 TWA |
| Sodium Fluoride | 7681-49-4 | "2.5 mg/m3 TWA (as F)" As Fluorides [RR-02792-9] |

#### 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 |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | 2 mg/m3 Ceiling |

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

| Chemical Name | CAS Number | Exposure Limit |
|---|---|---|
| Acetic Acid | 64-19-7 | 15 ppm STEL |

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

| Chemical Name | CAS Number | Exposure Limit |
|---|---|---|
| Acetic Acid | 64-19-7 | 10 ppm TWA |
| Sodium Fluoride | 7681-49-4 | "2.5 mg/m3 TWA (as F)" As Fluorides [RR-02792-9] |

### 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:** | 5.3 - 5.5 |
| **Kinematic Viscosity:** | Data not available. |
| **Solubility:** | miscible |
| **Vapor Pressure:** | Data not available. |
| **Evaporation Rate:** | Data not available. |
| **Relative Density:** | 1.05 |
| **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

oxidizing agents.

### 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 |
|---|---|---|
| Acetic Acid | 64-19-7 | Oral LD50 Rat 3530 mg/kg (Source: Canada_HSA) |
| Sodium Chloride | 7647-14-5 | Oral LD50 Rat 3550 mg/kg (Source: ECHA) |
| Sodium Fluoride | 7681-49-4 | Oral LD50 Rat 52 mg/kg (Source: NLM_CIP) |

**Acute Toxicity - Dermal Exposure:**

No information found.

| Chemical Name | CAS Number | Toxicity |
|---|---|---|
| Sodium Chloride | 7647-14-5 | Dermal LD50 Rabbit >10000 mg/kg (no deaths occurred, Source: ECHA) |
| Sodium Fluoride | 7681-49-4 | Dermal LD50 Rabbit >2000 mg/kg (Source: Canada_WHMIS) |

**Acute Toxicity - Inhalation Exposure:**

Not acutely toxic.

| Chemical Name | CAS Number | Toxicity |
|---|---|---|
| Acetic Acid | 64-19-7 | Inhalation LC50 Rat > 8.5 mg/L 4 h (Source: Canada_HSA) |
| Sodium Chloride | 7647-14-5 | Inhalation LC50 Rat >42 mg/L 1 h (no deaths occurred, aerosol, Source: ECHA_API) |
| Sodium Fluoride | 7681-49-4 | Inhalation LC50 Rat 1 mg/L 4 h (Source: Canada_WHMIS) |

### 11.2 Carcinogenicity:

**International Agency for Research on Cancer (IARC)**

| Chemical Name | CAS Number | Classification |
|---|---|---|
| Sodium Fluoride | 7681-49-4 | Group 3 (Not Classified) - Supplement 7 [1987] (listed under Fluorides inorganic used in drinking-water) |

**National Toxicology Program (NTP)**

| Chemical Name | CAS Number | Classification |
|---|---|---|
| Sodium Fluoride | 7681-49-4 | Male Rat - Equivocal Evidence; Female Rat - No Evidence; Male Mice - No Evidence; Female Mice - No Evidence (TR-393) |

**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 damage.

## SECTION 12: Ecological Information

### 12.1. Ecotoxicity

# Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

| Chemical Name | CAS Number | Species | Exposure | Toxicity |
|---|---|---|---|---|
| Sodium Chloride | 7647-14-5 | Earthworm | Acute | LC50 48 h Eisenia foetida 0.1 - 1 mg/cm2 [filter paper] (IUCLID) |
| Sodium Fluoride | 7681-49-4 | Freshwater Algae | Acute | EC50 96 h Pseudokirchneriella subcapitata 272 mg/L (IUCLID); EC50 72 h Desmodesmus subspicatus 850 mg/L [static] (EPA) |
| Sodium Hydroxide | 1310-73-2 | Freshwater Fish | Acute | LC50 96 h Oncorhynchus mykiss 45.4 mg/L [static] (IUCLID) |
| Acetic Acid | 64-19-7 | Freshwater Fish | Acute | LC50 96 h Pimephales promelas 79 mg/L [static] (EPA); LC50 96 h Lepomis macrochirus 75 mg/L [static] (EPA) |
| Sodium Chloride | 7647-14-5 | Freshwater Fish | Acute | LC50 96 h Lepomis macrochirus 5560 - 6080 mg/L [flow-through] (EPA); LC50 96 h Lepomis macrochirus 12946 mg/L [static] (EPA); LC50 96 h Pimephales promelas 6020 - 7070 mg/L [static] (EPA); LC50 96 h Pimephales promelas 7050 mg/L [semi-static] (EPA); LC50 96 h Pimephales promelas 6420 - 6700 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 4747 - 7824 mg/L [flow-through] (EPA) |
| Sodium Fluoride | 7681-49-4 | Freshwater Fish | Acute | LC50 96 h Lepomis macrochirus >530 mg/L (IUCLID); LC50 96 h Lepomis macrochirus 830 mg/L [semi-static] (EPA); LC50 96 h Oncorhynchus mykiss 38 - 68 mg/L [static] (EPA); LC50 96 h Pimephales promelas 180 mg/L [semi-static] (EPA) |
| Acetic Acid | 64-19-7 | Water Flea | Acute | EC50 48 h Daphnia magna 65 mg/L [Static] (EPA) |
| Sodium Chloride | 7647-14-5 | Water Flea | Acute | EC50 48 h Daphnia magna 1000 mg/L (IUCLID); EC50 48 h Daphnia magna 340.7 - 469.2 mg/L [Static] (EPA) |
| Sodium Fluoride | 7681-49-4 | Water Flea | Acute | EC50 48 h Daphnia magna 338 mg/L (IUCLID); EC50 48 h Daphnia magna 98 mg/L [Static] (EPA) |

## 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.

## 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.

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

Not regulated according to TDG regulations.

## SECTION 15: Regulatory Information

# Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

### 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 |
|---|---|---|
| | | No data found. |

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

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | 1000 lb final RQ; 454 kg final RQ |
| Acetic Acid | 64-19-7 | 5000 lb final RQ; 2270 kg final RQ |
| Sodium Fluoride | 7681-49-4 | 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 |
|---|---|---|
| | | No data found. |

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

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | Present |
| Acetic Acid | 64-19-7 | Present (including glacial) |
| Sodium Fluoride | 7681-49-4 | Present |

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

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | Environmental hazard |
| Acetic Acid | 64-19-7 | Environmental hazard; Environmental hazard (water solutions) |
| Sodium Fluoride | 7681-49-4 | Environmental hazard |

# Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

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

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | sn 1706 |
| Acetic Acid | 64-19-7 | sn 0004 |
| Sodium Fluoride | 7681-49-4 | sn 1699 |

### 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 |
|---|---|---|---|
| Sodium Hydroxide | 1310-73-2 | DSL | Present |
| 1,2-Cyclohexylenediamine Tetraacetic Acid (CDTA) | 13291-61-7 | DSL | Present |
| Acetic Acid | 64-19-7 | DSL | Present |
| Acetic Acid | 64-19-7 | NDSL | "Present" As Carboxylic acids, C1-5 [68937-68-8] |
| Sodium Chloride | 7647-14-5 | DSL | Present |
| Sodium Fluoride | 7681-49-4 | 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 |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | Present (ACTIVE) |
| 1,2-Cyclohexylenediamine Tetraacetic Acid (CDTA) | 13291-61-7 | Present [PMN] (ACTIVE) |
| Acetic Acid | 64-19-7 | Present (ACTIVE) |
| Sodium Chloride | 7647-14-5 | Present (ACTIVE) |
| Sodium Fluoride | 7681-49-4 | Present (ACTIVE) |
| Water | 7732-18-5 | Present [XU] (ACTIVE) |

# Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

### 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 |
|---|---|---|---|
| Sodium Hydroxide | 1310-73-2 | EINECS | 215-185-5 |
| 1,2-Cyclohexylenediamine Tetraacetic Acid (CDTA) | 13291-61-7 | EINECS | 236-308-9 |
| Acetic Acid | 64-19-7 | EINECS | 200-580-7 |
| Sodium Chloride | 7647-14-5 | EINECS | 231-598-3 |
| Sodium Fluoride | 7681-49-4 | EINECS | 231-667-8 |
| Water | 7732-18-5 | EINECS | 231-791-2 |

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

| Chemical Name | CAS Number | Status |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | Present [27689] |
| 1,2-Cyclohexylenediamine Tetraacetic Acid (CDTA) | 13291-61-7 | Present [12266] |
| Acetic Acid | 64-19-7 | Present [39068] |
| Sodium Chloride | 7647-14-5 | Present [24102] |
| Sodium Fluoride | 7681-49-4 | Present [13200] |
| Water | 7732-18-5 | Present [32224] |

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

| Chemical Name | CAS Number | List | Status |
|---|---|---|---|
| Sodium Hydroxide | 1310-73-2 | Annex 1 | Present [KE-31487] |
| 1,2-Cyclohexylenediamine Tetraacetic Acid (CDTA) | 13291-61-7 | Annex 2 | 2005-3-3174 (2005-3-3174) |
| Acetic Acid | 64-19-7 | Annex 1 | Present [KE-00013] |
| Sodium Chloride | 7647-14-5 | Annex 1 | Present [KE-31387] |
| Sodium Fluoride | 7681-49-4 | Annex 1 | Present [KE-31540] |
| Water | 7732-18-5 | Annex 1 | Present [KE-35400] |

# Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

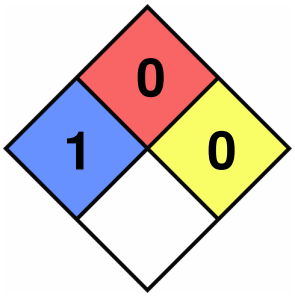
### 15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

| Chemical Name | CAS Number | MITI No. |
|---|---|---|
| Sodium Hydroxide | 1310-73-2 | (1)-410 |
| Acetic Acid | 64-19-7 | (2)-688 |
| Sodium Chloride | 7647-14-5 | (1)-236 |
| Sodium Fluoride | 7681-49-4 | (1)-332 |
| Water | 7732-18-5 | - (listed on Japanese Pharmacopoeia 8th Edition) |

## 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:**
2026-05-06

## 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.