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, 40 ppm F^- (Premixed with TISAB)

Product Number R3165020

Other Identifying Product Numbers R3165020-1A, R3165020-4A

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

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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, 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

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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

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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
		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

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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)

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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
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]

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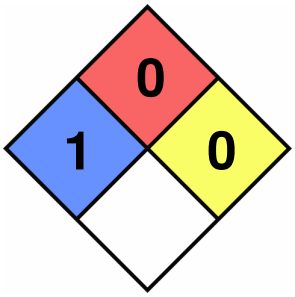
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

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.