



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Multi-Ion Standard
100 ppm each Cl^- , NO_2^- , NO_3^- , SO_4^{2-} , F^- , PO_4^{3-} , $\text{C}_2\text{O}_4^{2-}$ for Ion Chromatography
Product Number: MSTD100
Other Identifying Product Numbers: MSTD100-16, MSTD100-4

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company
Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

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

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

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

This product is not categorized as hazardous in any GHS hazard class.

2.2. GHS Label Elements

Pictograms: None Required.

Signal Word: None Required.

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Hazard Statements: None Required.

Precautionary Statements: None Required.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H ₂ O	18.01 g/mol	7732-18-5	99.88
Sodium Fluoride	NaF	41.98 g/mol	7681-49-4	< 0.1
Potassium Chloride	KCl	74.55 g/mol	7447-40-7	< 0.1
Potassium Sulfate	K ₂ SO ₄	174.25 g/mol	7778-80-5	< 0.1
Sodium Oxalate	Na ₂ C ₂ O ₄	133.99 g/mol	62-76-0	< 0.1
Sodium Nitrite	NaNO ₂	68.99 g/mol	7632-00-0	< 0.1
Potassium Dihydrogen Phosphate	KH ₂ PO ₄	136.08 g/mol	7778-77-0	< 0.1
Sodium Nitrate	NaNO ₃	84.99 g/mol	7631-99-4	< 0.1

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: May cause slight irritation.

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

Skin Contact: May cause slight irritation.

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

4.2. Most Important Symptoms and Effects, Acute and Delayed

Does not present any significant health hazards. Wash areas of contact with water. EYE CONTACT: May cause slight irritation. SKIN CONTACT: May cause slight irritation.

4.3. 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. Di with water or milk. Do not induce vomiting. Call a physician if necessary.

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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

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment 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 appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

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

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

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SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Sodium Fluoride (7681-49-4)	TLV-TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Sodium Fluoride (7681-49-4)	TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Fluoride (7681-49-4)	TLV-TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Sodium Fluoride (7681-49-4)	TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Fluoride (7681-49-4)	TLV-TWA	USA	2.5 mg/m ³ TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
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Sodium Fluoride (7681-49-4)	TWA	USA	"2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

8.3. Personal Protective Equipment

Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: Data not available.

Melting/Freezing Point: 0.0°C

Initial Boiling Point/Range: 100°C - 100°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.01

Solubility: Miscible

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

None identified.

10.4. Hazardous Decomposition Products

Will not occur.



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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral, Rat: (Potassium Chloride) 2600 mg/kg, (Sodium Nitrate) 1267 mg/kg, (Sodium Nitrite) 180 mg/kg, (Potassium Sulfate) 6600 mg/kg, (Sodium Fluoride) 52 mg/kg, (Sodium Oxalate) 11,160 mg/kg, Details of toxic effects not reported other than lethal dose value.

Skin Corrosion and Irritation:

Not applicable.

Serious Eye Damage and Irritation:

Not applicable.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

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SECTION 12: Ecological Information

12.1. Ecotoxicity

Not applicable.

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.

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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

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

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

Sodium Nitrite (CAS # 7632-00-0): "100 lb final RQ; 45.4 kg final RQ" As Sodium nitrite [7632-00-0]

Sodium Nitrite (CAS # 7632-00-0): 100 lb final RQ; 45.4 kg final RQ

Sodium Fluoride (CAS # 7681-49-4): "1000 lb final RQ; 454 kg final RQ" As Sodium fluoride [7681-49-4]

Sodium Fluoride (CAS # 7681-49-4): 1000 lb final RQ; 454 kg final RQ



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

Sodium Nitrate (CAS # 7631-99-4): "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)
As Nitrate compounds, water dissociable [RR-03804-0]

Sodium Nitrate (CAS # 7631-99-4): 1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)

Sodium Nitrite (CAS # 7632-00-0): "1.0 % de minimis concentration" As Sodium nitrite [7632-00-0]

Sodium Nitrite (CAS # 7632-00-0): 1.0 % de minimis concentration

15.5. Massachusetts Right-to-Know Substance List

Sodium Nitrate (CAS # 7631-99-4): "Present" As Sodium nitrate [7631-99-4]

Sodium Nitrate (CAS # 7631-99-4): Present

Sodium Nitrite (CAS # 7632-00-0): "Present" As Sodium nitrite [7632-00-0]

Sodium Nitrite (CAS # 7632-00-0): Present

Sodium Fluoride (CAS # 7681-49-4): "Present" As Sodium fluoride [7681-49-4]

Sodium Fluoride (CAS # 7681-49-4): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Sodium Nitrate (CAS # 7631-99-4): "Present" As Nitric acid, sodium salt [7631-99-4]

Sodium Nitrate (CAS # 7631-99-4): Present

Sodium Nitrite (CAS # 7632-00-0): "Environmental hazard" As Nitrous acid, sodium salt [7632-00-0]

Sodium Nitrite (CAS # 7632-00-0): "Present" As Nitrous acid, sodium salt [7632-00-0]

Sodium Nitrite (CAS # 7632-00-0): Environmental hazard

Sodium Nitrite (CAS # 7632-00-0): Present

Sodium Fluoride (CAS # 7681-49-4): "Environmental hazard" As Sodium fluoride (NaF) [7681-49-4]

Sodium Fluoride (CAS # 7681-49-4): "Present" As Sodium fluoride (NaF) [7681-49-4]

Sodium Fluoride (CAS # 7681-49-4): Environmental hazard

Sodium Fluoride (CAS # 7681-49-4): Present

Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]

Water (CAS # 7732-18-5): Present



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

Sodium Nitrate (CAS # 7631-99-4): "SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]
Sodium Nitrate (CAS # 7631-99-4): "sn 3722" As Nitrate compounds [RR-01770-9]
Sodium Nitrate (CAS # 7631-99-4): sn 3722
Sodium Nitrate (CAS # 7631-99-4): SN 3722 500 lb TPQ (water dissociable, Category Code N511)
Sodium Nitrite (CAS # 7632-00-0): "SN 2258 500 lb TPQ" As Sodium nitrite [7632-00-0]
Sodium Nitrite (CAS # 7632-00-0): "sn 2258" As Sodium nitrite [7632-00-0]
Sodium Nitrite (CAS # 7632-00-0): sn 2258
Sodium Nitrite (CAS # 7632-00-0): SN 2258 500 lb TPQ
Sodium Fluoride (CAS # 7681-49-4): "sn 0936" As Fluorides [RR-02792-9]
Sodium Fluoride (CAS # 7681-49-4): "sn 1699" As Sodium fluoride [7681-49-4]
Sodium Fluoride (CAS # 7681-49-4): "teratogen" As Sodium fluoride [7681-49-4]
Sodium Fluoride (CAS # 7681-49-4): sn 0936
Sodium Fluoride (CAS # 7681-49-4): sn 1699
Sodium Fluoride (CAS # 7681-49-4): teratogen

15.8. California Proposition 65

Not listed.

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

Sodium Oxalate (CAS # 62-76-0): "Present" As Ethanedioic acid, disodium salt [62-76-0] (DSL)
Sodium Oxalate (CAS # 62-76-0): Present (DSL)
Potassium Chloride (CAS # 7447-40-7): "Present" As Potassium chloride [7447-40-7] (DSL)
Potassium Chloride (CAS # 7447-40-7): Present (DSL)
Sodium Nitrate (CAS # 7631-99-4): "Present" As Sodium nitrate [7631-99-4] (DSL)
Sodium Nitrate (CAS # 7631-99-4): Present (DSL)
Sodium Nitrite (CAS # 7632-00-0): "Present" As Sodium nitrite [7632-00-0] (DSL)
Sodium Nitrite (CAS # 7632-00-0): Present (DSL)
Sodium Fluoride (CAS # 7681-49-4): "Present" As Sodium fluoride [7681-49-4] (DSL)
Sodium Fluoride (CAS # 7681-49-4): Present (DSL)
Water (CAS # 7732-18-5): "Present" As Water [7732-18-5] (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Potassium Dihydrogen Phosphate (CAS # 7778-77-0): Present (DSL)
Potassium Sulfate (CAS # 7778-80-5): "Present" As Sulfuric acid, potassium salt [10233-01-9] (NDSL)
Potassium Sulfate (CAS # 7778-80-5): Present (DSL)
Potassium Sulfate (CAS # 7778-80-5): Present (NDSL)

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

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

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Sodium Oxalate (CAS # 62-76-0): "Present (ACTIVE)" As Ethanedioic acid, sodium salt (1:2) [62-76-0]
Sodium Oxalate (CAS # 62-76-0): Present (ACTIVE)
Potassium Chloride (CAS # 7447-40-7): "Present (ACTIVE)" As Potassium chloride (KCl) [7447-40-7]
Potassium Chloride (CAS # 7447-40-7): Present (ACTIVE)
Sodium Nitrate (CAS # 7631-99-4): "Present (ACTIVE)" As Nitric acid sodium salt (1:1) [7631-99-4]
Sodium Nitrate (CAS # 7631-99-4): Present (ACTIVE)
Sodium Nitrite (CAS # 7632-00-0): "Present [S] (ACTIVE)" As Nitrous acid, sodium salt (1:1) [7632-00-0]
Sodium Nitrite (CAS # 7632-00-0): Present [S] (ACTIVE)
Sodium Fluoride (CAS # 7681-49-4): "Present (ACTIVE)" As Sodium fluoride (NaF) [7681-49-4]
Sodium Fluoride (CAS # 7681-49-4): Present (ACTIVE)
Water (CAS # 7732-18-5): "Present (ACTIVE)" As Water [7732-18-5]
Water (CAS # 7732-18-5): Present (ACTIVE)
Potassium Dihydrogen Phosphate (CAS # 7778-77-0): Present (ACTIVE)
Potassium Sulfate (CAS # 7778-80-5): Present (ACTIVE)

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

Sodium Oxalate (CAS # 62-76-0): "200-550-3" As Disodium oxalate [62-76-0]
Sodium Oxalate (CAS # 62-76-0): 200-550-3
Sodium Oxalate (CAS # 62-76-0): 239-292-1
Potassium Chloride (CAS # 7447-40-7): "231-211-8" As Potassium chloride [7447-40-7]
Potassium Chloride (CAS # 7447-40-7): 231-211-8
Sodium Nitrate (CAS # 7631-99-4): "231-554-3" As Sodium nitrate [7631-99-4]
Sodium Nitrate (CAS # 7631-99-4): 231-554-3
Sodium Nitrite (CAS # 7632-00-0): "231-555-9" As Sodium nitrite [7632-00-0]
Sodium Nitrite (CAS # 7632-00-0): 231-555-9
Sodium Fluoride (CAS # 7681-49-4): "231-667-8" As Sodium fluoride [7681-49-4]
Sodium Fluoride (CAS # 7681-49-4): 231-667-8
Water (CAS # 7732-18-5): "231-791-2" As Water [7732-18-5]
Water (CAS # 7732-18-5): 231-791-2
Potassium Dihydrogen Phosphate (CAS # 7778-77-0): 231-913-4
Potassium Dihydrogen Phosphate (CAS # 7778-77-0): 240-213-8
Potassium Sulfate (CAS # 7778-80-5): 231-915-5
Potassium Sulfate (CAS # 7778-80-5): 233-558-0

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

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16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

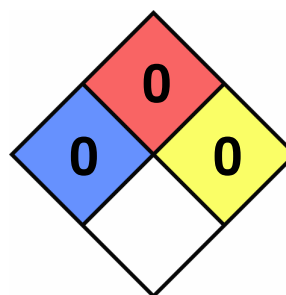
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

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

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 0
Flammability: 0
Reactivity: 0
Special Hazard:



16.4. Document Revision

Last Revision Date: 2025-02-02

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.