



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Mixed ICP Standard
500 ppm Na, 480 ppm SO₄, 250 ppm Ca, 25 ppm Mg, 150 ppm U, 10 ppm V in 5% HNO₃
Product Number RPMX080N
Other Identifying Product Numbers RPMX080N-500N

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 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
H314	Causes severe skin burns and eye damage

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
P234	Keep only in original packaging.
P260	Do not breathe fumes or mist.
P264	Wash hands, arms, and face thoroughly after handling.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.
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. 5.2 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	94.62
nitric acid	Nitric Acid	7697-37-2	5.13
disodium carbonate	Sodium Carbonate; Carbonic acid, disodium salt; Soda ash	497-19-8	0.11
calcium carbonate	Calcium Carbonate; Carbonic acid, calcium salt	471-34-1	< 0.1
diazanium sulfate	Ammonium Sulfate	7783-20-2	< 0.1
trioxouranium	Uranium Oxide; Uranium trioxide	1344-58-7	< 0.1
magnesium	Magnesium	7439-95-4	< 0.1
vanadium	Vanadium	7440-62-2	< 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: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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. 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 severe skin burns and eye damage CAUTION! Corrosive liquid. 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

Immediately call a poison center or doctor.

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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

Cover the spill with Sodium Carbonate or a soda ash-slaked lime mixture (50:50). Mix and add water to form slurry. Decant the liquid to the drain with excess water. Treat the solid residue as normal refuse. Wash site with soda ash solution. Always 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. Keep out of direct sunlight and away from heat, water, and incompatible materials.

SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

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U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Uranium Oxide	1344-58-7	"0.25 mg/m3 TWA (as U)" As Uranium, insoluble compounds [RR-00045-3]
Calcium Carbonate	471-34-1	"15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)" As Calcium carbonate [1317-65-3]
Nitric Acid	7697-37-2	2 ppm TWA; 5 mg/m3 TWA

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

Chemical Name	CAS Number	Exposure Limit
Vanadium	7440-62-2	0.5 mg/m3 Ceiling (respirable dust, as V2O5); 0.1 mg/m3 Ceiling (fume, as V2O5)

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
Uranium Oxide	1344-58-7	"0.6 mg/m3 STEL (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]
Nitric Acid	7697-37-2	4 ppm STEL

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

Chemical Name	CAS Number	Exposure Limit
Uranium Oxide	1344-58-7	"0.2 mg/m3 TWA (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]
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.

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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: Data not available.

Boiling Point/Range: Data not available.

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: Data not available.

Kinematic Viscosity: Data not available.

Solubility: miscible

Vapor Pressure: Data not available.

Evaporation Rate: Data not available.

Relative Density: 1.03

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.

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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
Uranium Oxide	1344-58-7	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)
Calcium Carbonate	471-34-1	Oral LD50 Rat 6450 mg/kg (Source: NLM_CIP)
Sodium Carbonate	497-19-8	Oral LD50 Rat 4090 mg/kg (Source: NLM_HSDB)
Vanadium	7440-62-2	Oral LD50 Rat >2000 mg/kg (females, Source: NLM_HSDB)
Ammonium Sulfate	7783-20-2	Oral LD50 Rat 2840 mg/kg (Source: NLM_CIP)

Acute Toxicity - Dermal Exposure:

No information found.

Chemical Name	CAS Number	Toxicity
Calcium Carbonate	471-34-1	Dermal LD50 Rat >2000 mg/kg (Source: ECHA_API)
Sodium Carbonate	497-19-8	Dermal LD50 Rabbit >2000 mg/kg (no deaths occurred, Source: ECHA)
Ammonium Sulfate	7783-20-2	Dermal LD50 Rat >2000 mg/kg (Source: NLM_HSDB)

Acute Toxicity - Inhalation Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Uranium Oxide	1344-58-7	Inhalation LC50 Acute Toxicity Estimate 0.05 mg/L 4 h (Source: ECHA)
Calcium Carbonate	471-34-1	Inhalation LC50 Rat >3 mg/L 4 h (no deaths occurred, aerosol, Source: ECHA_API)
Sodium Carbonate	497-19-8	Inhalation LC50 Rat 2300 mg/m3 2 h (aerosol, Source: ECHA_API)
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

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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:

Causes severe skin burns and eye damage.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Sodium Carbonate	497-19-8	Freshwater Fish	Acute	LC50 96 h <i>Lepomis macrochirus</i> 300 mg/L [static] (EPA); LC50 96 h <i>Pimephales promelas</i> 310 - 1220 mg/L [static] (EPA)
Ammonium Sulfate	7783-20-2	Freshwater Fish	Acute	LC50 96 h <i>Brachydanio rerio</i> 250 mg/L (IUCLID); LC50 96 h <i>Brachydanio rerio</i> 480 mg/L [flow-through] (IUCLID); LC50 96 h <i>Brachydanio rerio</i> 420 mg/L [semi-static] (IUCLID); LC50 96 h <i>Cyprinus carpio</i> 18 mg/L (IUCLID); LC50 96 h <i>Oncorhynchus mykiss</i> 32.2 - 41.9 mg/L [flow-through] (EPA); LC50 96 h <i>Oncorhynchus mykiss</i> 5.2 - 8.2 mg/L [static] (EPA); LC50 96 h <i>Pimephales promelas</i> >100 mg/L (IUCLID); LC50 96 h <i>Poecilia reticulata</i> 123 - 128 mg/L [semi-static] (EPA); LC50 96 h <i>Poecilia reticulata</i> 126 mg/L (IUCLID)
Sodium Carbonate	497-19-8	Water Flea	Acute	EC50 48 h <i>Daphnia magna</i> 265 mg/L (IUCLID)
Ammonium Sulfate	7783-20-2	Water Flea	Acute	LC50 48 h <i>Daphnia magna</i> 14 mg/L (IUCLID)

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)

Sizes: 500 mL

UN Number: UN3264

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

Hazard Class: 8

Packing Group: III

Hazard Label(s):



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

Sizes: 500 mL

UN Number: UN3264

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

Hazard Class: 8

Packing Group: III

Hazard Label(s):





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14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 500 mL

UN Number: UN3264

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

Hazard Class: 8

Packing Group: III

Hazard Label(s):



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
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
Vanadium	7440-62-2	Emission Reporting	1.0 % de minimis concentration (except when contained in an alloy)
Nitric Acid	7697-37-2	Emission Reporting	1.0 % de minimis concentration
Ammonium Sulfate	7783-20-2	Emission Reporting	"1.0 % de minimis concentration (10% of total aqueous Ammonia is reportable under this listing)" As Aqueous ammonia from water dissociable ammonium salts and other sources [RR-47925-4]

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Calcium Carbonate	471-34-1	"Present (including dust)" As Calcium carbonate [1317-65-3]
Magnesium	7439-95-4	Present
Vanadium	7440-62-2	Present (dust and fume)
Nitric Acid	7697-37-2	Extraordinarily hazardous
Ammonium Sulfate	7783-20-2	Present

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15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Calcium Carbonate	471-34-1	"Present" As Limestone [1317-65-3]
Magnesium	7439-95-4	Present
Vanadium	7440-62-2	Environmental hazard (dust; fume)
Nitric Acid	7697-37-2	Environmental hazard
Ammonium Sulfate	7783-20-2	Environmental hazard

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

Chemical Name	CAS Number	Regulatory Information
Calcium Carbonate	471-34-1	"sn 4001" As Calcium carbonate [1317-65-3]
Magnesium	7439-95-4	sn 1136
Vanadium	7440-62-2	sn 3762
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
Uranium Oxide	1344-58-7	DSL	Present
Calcium Carbonate	471-34-1	DSL	Present
Calcium Carbonate	471-34-1	NDSL	"Present" As Calcium carbonate [1317-65-3]
Sodium Carbonate	497-19-8	DSL	Present
Magnesium	7439-95-4	DSL	Present
Vanadium	7440-62-2	DSL	Present
Nitric Acid	7697-37-2	DSL	Present
Water	7732-18-5	DSL	Present
Ammonium Sulfate	7783-20-2	DSL	Present

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

Chemical Name	CAS Number	Status
Uranium Oxide	1344-58-7	Present (ACTIVE)
Calcium Carbonate	471-34-1	Present (ACTIVE)
Sodium Carbonate	497-19-8	Present (ACTIVE)
Magnesium	7439-95-4	Present (ACTIVE)
Vanadium	7440-62-2	Present (ACTIVE)
Nitric Acid	7697-37-2	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)
Ammonium Sulfate	7783-20-2	Present (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
Uranium Oxide	1344-58-7	EINECS	215-701-9
Calcium Carbonate	471-34-1	EINECS	207-439-9
Sodium Carbonate	497-19-8	EINECS	207-838-8
Magnesium	7439-95-4	EINECS	231-104-6
Vanadium	7440-62-2	EINECS	231-171-1
Nitric Acid	7697-37-2	EINECS	231-714-2
Water	7732-18-5	EINECS	231-791-2
Ammonium Sulfate	7783-20-2	EINECS	231-984-1

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

Chemical Name	CAS Number	Status
Calcium Carbonate	471-34-1	Present [34102]
Sodium Carbonate	497-19-8	Present [34127]
Magnesium	7439-95-4	Present [24921]
Vanadium	7440-62-2	Present [12010]
Nitric Acid	7697-37-2	Present [35578]
Water	7732-18-5	Present [32224]
Ammonium Sulfate	7783-20-2	Present [23019]

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

Chemical Name	CAS Number	List	Status
Calcium Carbonate	471-34-1	Annex 1	Present [KE-04487]
Sodium Carbonate	497-19-8	Annex 1	Present [KE-31380]
Magnesium	7439-95-4	Annex 1	Present [KE-22673]
Vanadium	7440-62-2	Annex 1	Present [KE-35266]
Nitric Acid	7697-37-2	Annex 1	Present [KE-25911]
Water	7732-18-5	Annex 1	Present [KE-35400]
Ammonium Sulfate	7783-20-2	Annex 1	Present [KE-01743]

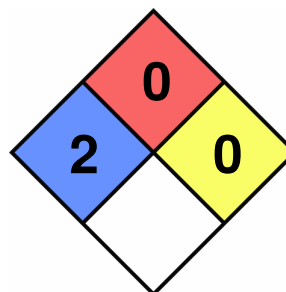
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Calcium Carbonate	471-34-1	(1)-122
Sodium Carbonate	497-19-8	(1)-164
Magnesium	7439-95-4	- (exempt)
Vanadium	7440-62-2	- (exempt)
Nitric Acid	7697-37-2	(1)-394
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)
Ammonium Sulfate	7783-20-2	(1)-400

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

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



16.2 Document Revision

Last Revision Date:
 2026-05-04

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.