

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: ICP Mixed Standard
50ppm Ca,Cu,Fe,Mn,Zn and 500ppm K,P in 5% HNO₃
Product Number: RPMX128N
Other Identifying Product Numbers: RPMX128N-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: 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.

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
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Corrosive to Metals	Category 1	H290	P234, P390, P406

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2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P234	Keep only in original container.
P260	Do not breathe fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P280	Wear protective gloves and eye protection.
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.
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 physician.
P321	Specific treatment (Wash areas of contact with water immediately).
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

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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	94.67
Nitric Acid	HNO ₃	63.01 g/mol	7697-37-2	4.98
Ammonium Dihydrogen Phosphate	NH ₄ H ₂ PO ₄	97.99 g/mol	7722-76-1	0.19
Potassium Nitrate	KNO ₃	101.10 g/mol	7757-79-1	0.13
Calcium Carbonate	CaCO ₃	100.09 g/mol	471-34-1	< 0.1
Zinc	Zn	65.40 g/mol	7440-66-6	< 0.1
Copper	Cu	63.54 g/mol	7440-50-8	< 0.1
Manganese	Mn	54.93 g/mol	7439-96-5	< 0.1
Iron	Fe	55.84 g/mol	7439-89-6	< 0.1

SECTION 4: First-Aid Measures

4.1. General First Aid Information

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.

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. May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

Ingestion: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes severe skin burns and eye damage. Causes serious eye damage. Corrosive Liquid. May be fatal if swallowed. Contains minute amounts of known and suspected carcinogens. 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. 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. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). 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. Do not induce vomiting. Call a physician if necessary.

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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

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 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 in corrosive resistant container with a resistant inner liner. 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
Calcium Carbonate (471-34-1)	TWA	USA	"15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)" As Calcium carbonate [1317-65-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Manganese (7439-96-5)	TLV-TWA	USA	"0.02 mg/m ³ TWA (respirable particulate matter); 0.1 mg/m ³ TWA (inhalable particulate matter)" As Manganese, elemental [7439-96-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m ³ Ceiling (fume)" As Manganese [7439-96-5]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m ³ Ceiling (fume)" As Manganese [7439-96-5]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	TLV-TWA	USA	"0.02 mg/m ³ TWA (respirable particulate matter); 0.1 mg/m ³ TWA (inhalable particulate matter)" As Manganese, elemental [7439-96-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese (7439-96-5)	TLV-TWA	USA	"0.02 mg/m ³ TWA (respirable particulate matter); 0.1 mg/m ³ TWA (inhalable particulate matter)" As Manganese, elemental [7439-96-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m ³ Ceiling (fume)" As Manganese [7439-96-5]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	TLV-TWA	USA	0.02 mg/m ³ TWA (respirable particulate matter); 0.1 mg/m ³ TWA (inhalable particulate matter)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese (7439-96-5)	PEL-Ceiling	USA	5 mg/m ³ Ceiling (fume)	U.S. - OSHA - Final PELs - Ceiling Limits

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Manganese (7439-96-5)	TLV-TWA	USA	"0.02 mg/m ³ TWA (respirable particulate matter); 0.1 mg/m ³ TWA (inhalable particulate matter)" As Manganese, elemental [7439-96-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m ³ Ceiling (fume)" As Manganese [7439-96-5]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m ³ Ceiling (fume)" As Manganese [7439-96-5]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	TLV-TWA	USA	"0.02 mg/m ³ TWA (respirable particulate matter); 0.1 mg/m ³ TWA (inhalable particulate matter)" As Manganese, elemental [7439-96-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m ³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S. - OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	TLV-TWA	USA	0.02 mg/m ³ TWA (respirable particulate matter, as Mn); 0.1 mg/m ³ TWA (inhalable particulate matter, as Mn)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TWA	USA	"0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)" As Copper [7440-50-8]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	"0.2 mg/m ³ TWA (fume)" As Copper [7440-50-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	0.2 mg/m ³ TWA (fume)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TLV-TWA	USA	"1 mg/m ³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TLV-TWA	USA	"1 mg/m ³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-STEL	USA	4 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	2 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	2 ppm TWA; 5 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	"2 ppm TWA" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	"4 ppm STEL" As Nitric acid [7697-37-2]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TWA	USA	"2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2]	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: Wear protective gloves and eye protection. Chemical resistant gloves.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. 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: Clear, colorless liquid

Physical State: Liquid

Odor: Data not available

Odor Threshold: Data not available.

pH: Acidic

Melting/Freezing Point: Approximately 0°C

Initial Boiling Point/Range: Approximately 100°C - Approximately 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: 1.00

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

Keep only in original container. Strong bases, metallic powders, Carbides, Hydrogen Sulfide, Turpentine and combustible organics.

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:

LDLo, Oral, Human: 430 mg/kg (Nitric Acid), details of toxic effects not reported other than lethal dose value.

Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Serious Eye Damage and Irritation:

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

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.

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Additional Toxicology Information:

Data not available.

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)

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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14.2. 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):



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

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

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

Nitric Acid (CAS # 7697-37-2): "1000 lb EPCRA RQ" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): "1000 lb TPQ" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): 1000 lb EPCRA RQ

Nitric Acid (CAS # 7697-37-2): 1000 lb TPQ

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

Copper (CAS # 7440-50-8): "5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$)" As Copper [7440-50-8]

Copper (CAS # 7440-50-8): 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$)

Zinc (CAS # 7440-66-6): "454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$); 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$)" As Zinc [7440-66-6]

Zinc (CAS # 7440-66-6): 454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$); 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $>100\text{ }\mu\text{m}$)

Nitric Acid (CAS # 7697-37-2): "1000 lb final RQ; 454 kg final RQ" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): 1000 lb final RQ; 454 kg final RQ

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

Manganese (CAS # 7439-96-5): "1.0 % de minimis concentration (includes any unique chemical substance that contains Manganese as part of that chemical's infrastructure, listed under Chemical Category N450)" As Manganese compounds [RR-00602-0]

Manganese (CAS # 7439-96-5): "1.0 % de minimis concentration" As Manganese [7439-96-5]

Manganese (CAS # 7439-96-5): 1.0 % de minimis concentration

Copper (CAS # 7440-50-8): "1.0 % de minimis concentration (includes any unique chemical substance that contains Copper as part of that chemical's infrastructure except for CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only Hydrogen and/or Bromine and/or Chlorine that meet the molecular structure specified within the regulation, listed under Chemical Category N100)" As Copper compounds [RR-00595-8]

Copper (CAS # 7440-50-8): "1.0 % de minimis concentration" As Copper [7440-50-8]

Copper (CAS # 7440-50-8): 1.0 % de minimis concentration

Zinc (CAS # 7440-66-6): "1.0 % de minimis concentration (dust or fume only)" As Zinc [7440-66-6]

Zinc (CAS # 7440-66-6): "1.0 % de minimis concentration (includes any unique chemical substance that contains Zinc as part of that chemical's infrastructure, listed under Chemical Category N982)" As Zinc compounds [RR-00578-7]

Zinc (CAS # 7440-66-6): 1.0 % de minimis concentration (dust or fume only)

Nitric Acid (CAS # 7697-37-2): "1.0 % de minimis concentration" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): 1.0 % de minimis concentration

Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): "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])"

Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): 1.0 % de minimis concentration (10% of total aqueous Ammonia is reportable under this listing)

Potassium Nitrate (CAS # 7757-79-1): "1.0 % de minimis concentration (reportable)"



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15.5. Massachusetts Right-to-Know Substance List

Calcium Carbonate (CAS # 471-34-1): "Present (including dust)" As Calcium carbonate [1317-65-3]
Manganese (CAS # 7439-96-5): "Present" As Manganese [7439-96-5]
Manganese (CAS # 7439-96-5): Present
Copper (CAS # 7440-50-8): "Present" As Copper [7440-50-8]
Copper (CAS # 7440-50-8): Present
Zinc (CAS # 7440-66-6): "Present" As Zinc [7440-66-6]
Zinc (CAS # 7440-66-6): Present
Nitric Acid (CAS # 7697-37-2): "Extraordinarily hazardous" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous
Potassium Nitrate (CAS # 7757-79-1): "Present" As Potassium nitrate [7757-79-1]
Potassium Nitrate (CAS # 7757-79-1): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Calcium Carbonate (CAS # 471-34-1): "Present" As Limestone [1317-65-3]
Manganese (CAS # 7439-96-5): "Environmental hazard" As Manganese [7439-96-5]
Manganese (CAS # 7439-96-5): "Environmental hazard" As Manganese compounds [RR-00602-0]
Manganese (CAS # 7439-96-5): "Present" As Manganese [7439-96-5]
Manganese (CAS # 7439-96-5): "Present" As Manganese compounds [RR-00602-0]
Manganese (CAS # 7439-96-5): Environmental hazard
Manganese (CAS # 7439-96-5): Present
Copper (CAS # 7440-50-8): "Environmental hazard (dust; fume; metal)" As Copper [7440-50-8]
Copper (CAS # 7440-50-8): "Environmental hazard" As Copper compounds [RR-00595-8]
Copper (CAS # 7440-50-8): "Present (dust; fume; metal)" As Copper [7440-50-8]
Copper (CAS # 7440-50-8): "Present" As Copper compounds [RR-00595-8]
Copper (CAS # 7440-50-8): Environmental hazard (dust; fume; metal)
Copper (CAS # 7440-50-8): Present (dust; fume; metal)
Zinc (CAS # 7440-66-6): "Environmental hazard" As Zinc [7440-66-6]
Zinc (CAS # 7440-66-6): "Environmental hazard" As Zinc compounds [RR-00578-7]
Zinc (CAS # 7440-66-6): "Present" As Zinc [7440-66-6]
Zinc (CAS # 7440-66-6): "Present" As Zinc compounds [RR-00578-7]
Zinc (CAS # 7440-66-6): Environmental hazard
Zinc (CAS # 7440-66-6): Present
Nitric Acid (CAS # 7697-37-2): "Environmental hazard" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): "Present" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): Environmental hazard
Nitric Acid (CAS # 7697-37-2): Present
Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]
Water (CAS # 7732-18-5): Present
Potassium Nitrate (CAS # 7757-79-1): "Present" As Nitric acid, potassium salt [7757-79-1]
Potassium Nitrate (CAS # 7757-79-1): Present

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

Calcium Carbonate (CAS # 471-34-1): "sn 4001" As Calcium carbonate [1317-65-3]

Manganese (CAS # 7439-96-5): "flammable - third degree" As Manganese [7439-96-5]

Manganese (CAS # 7439-96-5): "SN 1155 500 lb TPQ" As Manganese [7439-96-5]

Manganese (CAS # 7439-96-5): "sn 1155" As Manganese [7439-96-5]

Manganese (CAS # 7439-96-5): "SN 2324 500 lb TPQ (Category Code N450. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Manganese compounds [RR-00602-0]

Manganese (CAS # 7439-96-5): "sn 2324" As Manganese compounds [RR-00602-0]

Manganese (CAS # 7439-96-5): flammable - third degree

Manganese (CAS # 7439-96-5): sn 1155

Manganese (CAS # 7439-96-5): SN 1155 500 lb TPQ

Copper (CAS # 7440-50-8): "SN 0528 500 lb TPQ" As Copper [7440-50-8]

Copper (CAS # 7440-50-8): "sn 0528" As Copper [7440-50-8]

Copper (CAS # 7440-50-8): "SN 2215 500 lb TPQ (except C.I. Pigment Blue 15 (CAS 147-14-8), C.I. Pigment Green 7 (CAS 1328-53-6), and C.I. Pigment Green 36 (CAS 14302-13-7), and Copper phthalocyanine compounds that are substituted with only Hydrogen, and/or Chlorine, and/or Bromine, Category Code N100. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Copper compounds [RR-00595-8]

Copper (CAS # 7440-50-8): "sn 2215" As Copper compounds [RR-00595-8]

Copper (CAS # 7440-50-8): sn 0528

Copper (CAS # 7440-50-8): SN 0528 500 lb TPQ

Zinc (CAS # 7440-66-6): "flammable - third degree" As Zinc [7440-66-6]

Zinc (CAS # 7440-66-6): "SN 2021 500 lb TPQ (dust or fume)" As Zinc [7440-66-6]

Zinc (CAS # 7440-66-6): "sn 2021" As Zinc [7440-66-6]

Zinc (CAS # 7440-66-6): "SN 3012 500 lb TPQ (Category Code N982. Includes any unique chemical substance that contains the named metal as part that chemical structure)" As Zinc compounds [RR-00578-7]

Zinc (CAS # 7440-66-6): "sn 3012" As Zinc compounds [RR-00578-7]

Zinc (CAS # 7440-66-6): flammable - third degree

Zinc (CAS # 7440-66-6): sn 2021

Zinc

15.8. California Proposition 65

Not listed.

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

Calcium Carbonate (CAS # 471-34-1): "Present" As Calcium carbonate [1317-65-3] (NDSL)
Calcium Carbonate (CAS # 471-34-1): "Present" As Carbonic acid, calcium salt (1:1) [471-34-1] (DSL)
Calcium Carbonate (CAS # 471-34-1): Present (DSL)
Iron (CAS # 7439-89-6): "Present" As Iron [7439-89-6] (DSL)
Iron (CAS # 7439-89-6): Present (DSL)
Manganese (CAS # 7439-96-5): "Present" As Manganese [7439-96-5] (DSL)
Manganese (CAS # 7439-96-5): Present (DSL)
Copper (CAS # 7440-50-8): "Present" As Copper [7440-50-8] (DSL)
Copper (CAS # 7440-50-8): Present (DSL)
Zinc (CAS # 7440-66-6): "Present" As Zinc [7440-66-6] (DSL)
Zinc (CAS # 7440-66-6): Present (DSL)
Nitric Acid (CAS # 7697-37-2): "Present" As Nitric acid [7697-37-2] (DSL)
Nitric Acid (CAS # 7697-37-2): Present (DSL)
Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): Present (DSL)
Water (CAS # 7732-18-5): "Present" As Water [7732-18-5] (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Potassium Nitrate (CAS # 7757-79-1): "Present" As Potassium nitrate [7757-79-1] (DSL)
Potassium Nitrate (CAS # 7757-79-1): Present (DSL)

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.

Calcium Carbonate (CAS # 471-34-1): "Present (ACTIVE)" As Carbonic acid, calcium salt (1:1) [471-34-1]
Calcium Carbonate (CAS # 471-34-1): Present (ACTIVE)
Iron (CAS # 7439-89-6): "Present (ACTIVE)" As Iron [7439-89-6]
Iron (CAS # 7439-89-6): Present (ACTIVE)
Manganese (CAS # 7439-96-5): "Present (ACTIVE)" As Manganese [7439-96-5]
Manganese (CAS # 7439-96-5): Present (ACTIVE)
Copper (CAS # 7440-50-8): "Present (ACTIVE)" As Copper [7440-50-8]
Copper (CAS # 7440-50-8): Present (ACTIVE)
Zinc (CAS # 7440-66-6): "Present (ACTIVE)" As Zinc [7440-66-6]
Zinc (CAS # 7440-66-6): Present (ACTIVE)
Nitric Acid (CAS # 7697-37-2): "Present (ACTIVE)" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): Present (ACTIVE)
Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): Present (ACTIVE)
Water (CAS # 7732-18-5): "Present (ACTIVE)" As Water [7732-18-5]
Water (CAS # 7732-18-5): Present (ACTIVE)
Potassium Nitrate (CAS # 7757-79-1): "Present (ACTIVE)" As Nitric acid potassium salt (1:1) [7757-79-1]
Potassium Nitrate (CAS # 7757-79-1): Present (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)

Calcium Carbonate (CAS # 471-34-1): "207-439-9" As Calcium carbonate [471-34-1]

Calcium Carbonate (CAS # 471-34-1): 207-439-9

Iron (CAS # 7439-89-6): "231-096-4" As Iron [7439-89-6]

Iron (CAS # 7439-89-6): 231-096-4

Manganese (CAS # 7439-96-5): "231-105-1" As Manganese [7439-96-5]

Manganese (CAS # 7439-96-5): 231-105-1

Copper (CAS # 7440-50-8): "231-159-6" As Copper [7440-50-8]

Copper (CAS # 7440-50-8): 231-159-6

Zinc (CAS # 7440-66-6): "231-175-3" As Zinc [7440-66-6]

Zinc (CAS # 7440-66-6): 231-175-3

Nitric Acid (CAS # 7697-37-2): "231-714-2" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): 231-714-2

Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): 231-764-5

Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): 233-330-0

Water (CAS # 7732-18-5): "231-791-2" As Water [7732-18-5]

Water (CAS # 7732-18-5): 231-791-2

Potassium Nitrate (CAS # 7757-79-1): "231-818-8" As Potassium nitrate [7757-79-1]

Potassium Nitrate (CAS # 7757-79-1): 231-818-8

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

May be corrosive to metals. Causes severe skin burns and eye damage.

Keep only in original container. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Store locked up. Store in corrosive resistant container with a resistant inner liner.

Dispose of contents in accordance with local, state, federal and international regulations.

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16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

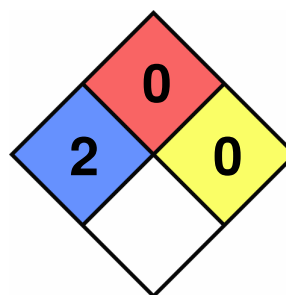
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

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

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 2
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.