



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation P7 Library Fit Solution
100 ppm Al, Sb, As, Pb, P, S, Ti / 10 ppm Cd, Fe, Mn Zn in 5% HNO₃
Product Number RPMX092N
Other Identifying Product Numbers RPMX092N-1N

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

5.2 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 5.3 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	94.66
nitric acid	Nitric Acid	7697-37-2	5.08
aluminum trinitrate nonahydrate	Aluminum Nitrate Nonahydrate; Nitric acid, aluminium salt, nonahydrate	7784-27-2	0.14
azanium dihydrogen phosphate	Ammonium Dihydrogen Phosphate; Ammonium Phosphate Monobasic	7722-76-1	< 0.1
diazanium sulfate	Ammonium Sulfate	7783-20-2	< 0.1
diantimony trioxide	Antimony Trioxide; antimony(III) oxide	1309-64-4	< 0.1
arsenic (III) oxide	Arsenic Trioxide; Diarsenic trioxide; White arsenic	1327-53-3	< 0.1
lead	Lead	7439-92-1	< 0.1
thallium	Thallium	7440-28-0	< 0.1
cadmium	Cadmium	7440-43-9	< 0.1
zinc	Zinc	7440-66-6	< 0.1
fluorane	Hydrofluoric Acid	7664-39-3	< 0.1
manganese	Manganese	7439-96-5	< 0.1
iron	Iron	7439-89-6	< 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 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.

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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. Do not induce vomiting. Call a physician if necessary.

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.

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
Antimony Trioxide	1309-64-4	"0.5 mg/m3 TWA (as Sb)" As Antimony compounds [RR-00585-6]
Arsenic Trioxide	1327-53-3	"10 µg/m3 TWA (as As)" As Arsenic, inorganic compounds [RR-00065-7]
Lead	7439-92-1	50 µg/m3 TWA
Cadmium	7440-43-9	5 µg/m3 TWA
Hydrofluoric Acid	7664-39-3	3 ppm TWA (as F)
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
Manganese	7439-96-5	5 mg/m3 Ceiling (fume)
Cadmium	7440-43-9	0.3 mg/m3 Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, fume); 0.6 mg/m3 Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, dust)

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

Chemical Name	CAS Number	Exposure Limit
Arsenic Trioxide	1327-53-3	"10 µg/m3 TWA (See 29 CFR 1910.1018; except Arsine, as As); 5 µg/m3 Action Level (as As)" As Inorganic arsenic compounds [RR-00065-7]
Lead	7439-92-1	30 µg/m3 Action Level (See 29 CFR 1910.1025); 50 µg/m3 TWA
Cadmium	7440-43-9	5 µg/m3 TWA (See 29 CFR 1910.1027); 2.5 µg/m3 Action Level

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

Chemical Name	CAS Number	Exposure Limit
Hydrofluoric Acid	7664-39-3	2 ppm Ceiling (as F)

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

Chemical Name	CAS Number	Exposure Limit
Nitric Acid	7697-37-2	4 ppm STEL



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

Chemical Name	CAS Number	Exposure Limit
Antimony Trioxide	1309-64-4	0.02 mg/m3 TWA (inhalable particulate matter)
Arsenic Trioxide	1327-53-3	"0.01 mg/m3 TWA (as As)" As Arsenic inorganic compounds [RR-00065-7]
Lead	7439-92-1	0.05 mg/m3 TWA
Manganese	7439-96-5	0.02 mg/m3 TWA (respirable particulate matter); 0.1 mg/m3 TWA (inhalable particulate matter)
Thallium	7440-28-0	0.02 mg/m3 TWA (inhalable particulate matter)
Cadmium	7440-43-9	0.01 mg/m3 TWA; 0.002 mg/m3 TWA (respirable particulate matter)
Hydrofluoric Acid	7664-39-3	0.5 ppm TWA (as F)
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.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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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:	< 2
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. 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 acutely toxic.

Chemical Name	CAS Number	Toxicity
Antimony Trioxide	1309-64-4	Oral LD50 Rat >34600 mg/kg (Source: NLM_CIP)
Arsenic Trioxide	1327-53-3	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)
Manganese	7439-96-5	Oral LD50 Rat 9 g/kg (Source: NLM_CIP)
Thallium	7440-28-0	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: ECHA)
Cadmium	7440-43-9	Oral LD50 Rat 2300 mg/kg (Source: Canada_WHMIS)
Hydrofluoric Acid	7664-39-3	Oral LD50 Acute Toxicity Estimate 5 mg/kg (Source: Canada_WHMIS)
Ammonium Dihydrogen Phosphate	7722-76-1	Oral LD50 Rat >2000 mg/kg (no deaths occurred, Source: ECHA)
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
Antimony Trioxide	1309-64-4	Dermal LD50 Rabbit >2000 mg/kg (Source: NLM_HSDB)
Ammonium Dihydrogen Phosphate	7722-76-1	Dermal LD50 Rabbit >7940 mg/kg (Source: NLM_CIP)
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
Antimony Trioxide	1309-64-4	Inhalation LC50 Rat >5.2 mg/L 4 h (no deaths occurred, aerosol, Source: ECHA_API)
Arsenic Trioxide	1327-53-3	Inhalation LC50 Acute Toxicity Estimate 0.5 mg/L 4 h (Source: ECHA)
Manganese	7439-96-5	Inhalation LC50 Rat >5.14 mg/L 4 h (no deaths occurred, dust, Source: ECHA_API)
Thallium	7440-28-0	Inhalation LC50 Acute Toxicity Estimate 0.05 mg/L 4 h (Source: ECHA)
Cadmium	7440-43-9	Inhalation LC50 Rat 25 mg/m3 30 min (Source: NLM_CIP)
Hydrofluoric Acid	7664-39-3	Inhalation LC50 Rat 0.79 mg/L 1 h (vapor, Source: JAPAN_GHS)
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)

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Chemical Name	CAS Number	Classification
Antimony Trioxide	1309-64-4	Group 2A (Probably Carcinogenic to Humans) - Monograph 131 [2023]; Monograph 47 [1989] As Trivalent antimony compounds
Arsenic Trioxide	1327-53-3	Group 1 (Carcinogenic to Humans) - Supplement 7 [1987] (listed under Arsenic and arsenic compounds)
Lead	7439-92-1	Group 2B (Possibly Carcinogenic to Humans) - Supplement 7 [1987]; Monograph 23 [1980]
Cadmium	7440-43-9	Group 1 (Carcinogenic to Humans) - Monograph 100C [2012]; Monograph 58 [1993]; Supplement 7 [1987]
Nitric Acid	7697-37-2	Group 1 (Carcinogenic to Humans) - Monograph 100F [2012]; Monograph 54 [1992] As Acid mists, strong inorganic

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
Antimony Trioxide	1309-64-4	Reasonably Anticipated To Be A Human Carcinogen; Male Rat - Some Evidence; Female Rat - Some Evidence; Male Mice - Clear Evidence; Female Mice - Clear Evidence (TR-590)
Arsenic Trioxide	1327-53-3	"Known Human Carcinogen" As Arsenic, inorganic compounds [RR-00065-7]
Lead	7439-92-1	Reasonably Anticipated To Be A Human Carcinogen (listed under Lead and lead compounds)
Cadmium	7440-43-9	Known Human Carcinogen

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
Arsenic Trioxide	1327-53-3	"see 29 CFR 1910.1018 (except Arsine)" As Inorganic arsenic compounds [RR-00065-7]
Cadmium	7440-43-9	see 29 CFR 1910.1027

11.3 Additional Toxicology Information:

Causes severe skin burns and eye damage.

SECTION 12: Ecological Information

12.1. Ecotoxicity

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Chemical Name	CAS Number	Species	Exposure	Toxicity
Antimony Trioxide	1309-64-4	Freshwater Algae	Acute	EC50 72 h Pseudokirchneriella subcapitata 0.63 - 0.8 mg/L (EPA); EC50 96 h Pseudokirchneriella subcapitata 0.65 - 0.81 mg/L (EPA)
Zinc	7440-66-6	Freshwater Algae	Acute	EC50 96 h Pseudokirchneriella subcapitata 0.11 - 0.271 mg/L [static] (EPA); EC50 72 h Pseudokirchneriella subcapitata 0.09 - 0.125 mg/L [static] (EPA)
Antimony Trioxide	1309-64-4	Freshwater Fish	Acute	LC50 96 h Pimephales promelas >80 mg/L [static] (EPA); LC50 96 h Brachydanio rerio >1000 mg/L [static] (IUCLID)
Arsenic Trioxide	1327-53-3	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 135 mg/L (IUCLID); LC50 96 h Oncorhynchus mykiss 18.8 - 21.4 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss >1000 mg/L [static] (EPA)
Lead	7439-92-1	Freshwater Fish	Acute	LC50 96 h Cyprinus carpio 0.44 mg/L [semi-static] (EPA); LC50 96 h Oncorhynchus mykiss 1.17 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 1.32 mg/L [static] (EPA)
Manganese	7439-96-5	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss >3.6 mg/L [semi-static] (ECHA)
Cadmium	7440-43-9	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss 0.003 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 0.006 mg/L [static] (EPA); LC50 96 h Cyprinus carpio 0.002 mg/L (EPA); LC50 96 h Cyprinus carpio 4.26 mg/L [semi-static] (EPA); LC50 96 h Cyprinus carpio 0.24 mg/L [static] (EPA); LC50 96 h Lepomis macrochirus 21.1 mg/L [flow-through] (EPA); LC50 96 h Oryzias latipes 0.016 mg/L (EPA); LC50 96 h Pimephales promelas 0.0004 - 0.003 mg/L (EPA)

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Zinc	7440-66-6	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 2.16 - 3.05 mg/L [flow-through] (EPA); LC50 96 h Pimephales promelas 0.211 - 0.269 mg/L [semi-static] (EPA); LC50 96 h Pimephales promelas 2.66 mg/L [static] (EPA); LC50 96 h Cyprinus carpio 30 mg/L (EPA); LC50 96 h Cyprinus carpio 0.45 mg/L [semi-static] (EPA); LC50 96 h Cyprinus carpio 7.8 mg/L [static] (EPA); LC50 96 h Lepomis macrochirus 3.5 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 0.24 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 0.59 mg/L [semi-static] (EPA); LC50 96 h Oncorhynchus mykiss 0.41 mg/L [static] (EPA)
Ammonium Dihydrogen Phosphate	7722-76-1	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss >85.9 mg/L [static] (ECHA)
Ammonium Sulfate	7783-20-2	Freshwater Fish	Acute	LC50 96 h Brachydanio rerio 250 mg/L (IUCLID); LC50 96 h Brachydanio rerio 480 mg/L [flow-through] (IUCLID); LC50 96 h Brachydanio rerio 420 mg/L [semi-static] (IUCLID); LC50 96 h Cyprinus carpio 18 mg/L (IUCLID); LC50 96 h Oncorhynchus mykiss 32.2 - 41.9 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 5.2 - 8.2 mg/L [static] (EPA); LC50 96 h Pimephales promelas >100 mg/L (IUCLID); LC50 96 h Poecilia reticulata 123 - 128 mg/L [semi-static] (EPA); LC50 96 h Poecilia reticulata 126 mg/L (IUCLID)
Antimony Trioxide	1309-64-4	Water Flea	Acute	EC50 48 h Daphnia magna >1000 mg/L (IUCLID); EC50 48 h Daphnia magna 361.5 - 496.0 mg/L [Static] (EPA)
Lead	7439-92-1	Water Flea	Acute	EC50 48 h water flea 600 µg/L
Cadmium	7440-43-9	Water Flea	Acute	EC50 48 h Daphnia magna 0.0244 mg/L [Static] (EPA)
Zinc	7440-66-6	Water Flea	Acute	EC50 48 h Daphnia magna 0.139 - 0.908 mg/L [Static] (EPA)
Hydrofluoric Acid	7664-39-3	Water Flea	Acute	EC50 48 h Daphnia species 270 mg/L (IUCLID)
Ammonium Sulfate	7783-20-2	Water Flea	Acute	LC50 48 h Daphnia magna 14 mg/L (IUCLID)
Antimony Trioxide	1309-64-4	Water Flea	Chronic	NOEC 21 d Daphnia magna 1.74 mg/L [static] (reproduction, ECHA_API)

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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: 1 L

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: 1 L

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: 1 L

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
Arsenic Trioxide	1327-53-3	"10 µg/m ³ TWA (See 29 CFR 1910.1018, except Arsine, as As); 5 µg/m ³ Action Level (See 29 CFR 1910.1018, except Arsine, as As)" As Inorganic arsenic compounds [RR-00065-7]
Lead	7439-92-1	30 µg/m ³ Action Level (See 29 CFR 1910.1025); 50 µg/m ³ TWA (See 29 CFR 1910.1025)
Cadmium	7440-43-9	5 µg/m ³ TWA (See 29 CFR 1910.1027); 2.5 µg/m ³ Action Level

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

Chemical Name	CAS Number	RQ	TPQ
Arsenic Trioxide	1327-53-3	100 lb lower TPQ; 10000 lb upper TPQ	1 lb EPCRA RQ
Hydrofluoric Acid	7664-39-3	100 lb TPQ	100 lb EPCRA RQ
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
Antimony Trioxide	1309-64-4	1000 lb final RQ; 454 kg final RQ
Arsenic Trioxide	1327-53-3	1 lb final RQ; 0.454 kg final RQ
Lead	7439-92-1	10 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 µm); 4.54 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 µm)
Thallium	7440-28-0	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 µm); 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 µm)
Cadmium	7440-43-9	10 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 µm); 4.54 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 µm)
Zinc	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 µm); 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 µm)
Hydrofluoric Acid	7664-39-3	100 lb final RQ; 45.4 kg final RQ
Nitric Acid	7697-37-2	1000 lb final RQ; 454 kg final RQ

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15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List	Regulatory Information
Antimony Trioxide	1309-64-4	Emission Reporting	"1.0 % de minimis concentration (includes any unique chemical substance that contains Antimony as part of that chemical's infrastructure, listed under Chemical Category N010)" As Antimony compounds [RR-00585-6]
Arsenic Trioxide	1327-53-3	Emission Reporting	"0.1 % de minimis concentration (includes any unique chemical substance that contains Arsenic as part of that chemical's infrastructure, listed under Chemical Category N020)" As Arsenic, inorganic compounds [RR-00065-7]
Lead	7439-92-1	Emission Reporting	not eligible for the de minimis exemption
Lead	7439-92-1	Chemicals of Special Concern	100 lb RT (this lower threshold does not apply to lead when it is contained in stainless steel, brass or bronze alloy)
Manganese	7439-96-5	Emission Reporting	1.0 % de minimis concentration
Thallium	7440-28-0	Emission Reporting	1.0 % de minimis concentration
Cadmium	7440-43-9	Emission Reporting	0.1 % de minimis concentration
Zinc	7440-66-6	Emission Reporting	1.0 % de minimis concentration (dust or fume only)
Hydrofluoric Acid	7664-39-3	Emission Reporting	1.0 % de minimis concentration
Nitric Acid	7697-37-2	Emission Reporting	1.0 % de minimis concentration
Ammonium Dihydrogen Phosphate	7722-76-1	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]
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]
Aluminum Nitrate Nonahydrate	7784-27-2	Emission Reporting	"1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]

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15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Antimony Trioxide	1309-64-4	Present
Arsenic Trioxide	1327-53-3	Extraordinarily hazardous
Lead	7439-92-1	Teratogen
Manganese	7439-96-5	Present
Thallium	7440-28-0	Present
Cadmium	7440-43-9	Carcinogen; Extraordinarily hazardous
Zinc	7440-66-6	Present
Hydrofluoric Acid	7664-39-3	Extraordinarily hazardous
Nitric Acid	7697-37-2	Extraordinarily hazardous
Ammonium Sulfate	7783-20-2	Present

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Antimony Trioxide	1309-64-4	Environmental hazard
Arsenic Trioxide	1327-53-3	Environmental hazard; Special hazardous substance
Lead	7439-92-1	Environmental hazard
Manganese	7439-96-5	Environmental hazard
Thallium	7440-28-0	Environmental hazard
Cadmium	7440-43-9	Environmental hazard (dust; fume; metal; powder); Special hazardous substance (metal; powder)
Zinc	7440-66-6	Environmental hazard
Hydrofluoric Acid	7664-39-3	Environmental hazard
Nitric Acid	7697-37-2	Environmental hazard
Ammonium Sulfate	7783-20-2	Environmental hazard
Aluminum Nitrate Nonahydrate	7784-27-2	"Present" As Aluminum soluble salts [RR-00021-5]

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

Chemical Name	CAS Number	Regulatory Information
Antimony Trioxide	1309-64-4	sn 0149
Arsenic Trioxide	1327-53-3	sn 0161
Lead	7439-92-1	sn 1096
Manganese	7439-96-5	sn 1155
Thallium	7440-28-0	sn 1840
Cadmium	7440-43-9	sn 0305
Zinc	7440-66-6	sn 2021
Hydrofluoric Acid	7664-39-3	sn 3759
Nitric Acid	7697-37-2	sn 1356
Aluminum Nitrate Nonahydrate	7784-27-2	"sn 0061" As Aluminum nitrate [13473-90-0]; "sn 3722" As Nitrate compounds [RR-01770-9]

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Antimony Trioxide	1309-64-4	carcinogen, 10/1/1990
Antimony Trioxide	1309-64-4	0.13 µg/day NSRL (inhalation)
Arsenic Trioxide	1327-53-3	"carcinogen, 2/27/1987" As Arsenic, inorganic compounds [RR-00065-7]
Arsenic Trioxide	1327-53-3	"developmental toxicity, 5/1/1997" As Arsenic inorganic oxides [RR-03689-5]
Arsenic Trioxide	1327-53-3	"0.06 µg/day NSRL (inhalation, listed under Arsenic); 10 µg/day NSRL (except inhalation, listed under Arsenic)" As Arsenic, inorganic compounds [RR-00065-7]
Lead	7439-92-1	carcinogen, 10/1/1992
Lead	7439-92-1	developmental toxicity, 2/27/1987
Lead	7439-92-1	male reproductive toxicity, 2/27/87
Lead	7439-92-1	female reproductive toxicity 2/27/87
Lead	7439-92-1	15 µg/day NSRL (oral)
Cadmium	7440-43-9	carcinogen, 10/1/1987
Cadmium	7440-43-9	developmental toxicity, 5/1/1997
Cadmium	7440-43-9	male reproductive toxicity, 5/1/97
Cadmium	7440-43-9	0.05 µg/day NSRL (inhalation)

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

Chemical Name	CAS Number	List	Status
Antimony Trioxide	1309-64-4	DSL	Present
Arsenic Trioxide	1327-53-3	DSL	Present
Iron	7439-89-6	DSL	Present
Lead	7439-92-1	DSL	Present
Manganese	7439-96-5	DSL	Present
Thallium	7440-28-0	DSL	Present
Cadmium	7440-43-9	DSL	Present
Zinc	7440-66-6	DSL	Present
Hydrofluoric Acid	7664-39-3	DSL	Present
Nitric Acid	7697-37-2	DSL	Present
Ammonium Dihydrogen Phosphate	7722-76-1	DSL	Present
Water	7732-18-5	DSL	Present
Ammonium Sulfate	7783-20-2	DSL	Present
Aluminum Nitrate Nonahydrate	7784-27-2	DSL	"Present" As Aluminum nitrate [13473-90-0]

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

Chemical Name	CAS Number	Status
Antimony Trioxide	1309-64-4	Present (ACTIVE)
Arsenic Trioxide	1327-53-3	Present (ACTIVE)
Iron	7439-89-6	Present (ACTIVE)
Lead	7439-92-1	Present (ACTIVE)
Manganese	7439-96-5	Present (ACTIVE)
Thallium	7440-28-0	Present (ACTIVE)
Cadmium	7440-43-9	Present (ACTIVE)
Zinc	7440-66-6	Present (ACTIVE)
Hydrofluoric Acid	7664-39-3	Present (ACTIVE)
Nitric Acid	7697-37-2	Present (ACTIVE)
Ammonium Dihydrogen Phosphate	7722-76-1	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)
Ammonium Sulfate	7783-20-2	Present (ACTIVE)
Aluminum Nitrate Nonahydrate	7784-27-2	"Present (ACTIVE)" As Nitric acid, aluminum salt (3:1) [13473-90-0]

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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
Antimony Trioxide	1309-64-4	EINECS	215-175-0
Arsenic Trioxide	1327-53-3	EINECS	215-481-4
Iron	7439-89-6	EINECS	231-096-4
Lead	7439-92-1	EINECS	231-100-4
Manganese	7439-96-5	EINECS	231-105-1
Thallium	7440-28-0	EINECS	231-138-1
Cadmium	7440-43-9	EINECS	231-152-8
Zinc	7440-66-6	EINECS	231-175-3
Hydrofluoric Acid	7664-39-3	EINECS	231-634-8
Nitric Acid	7697-37-2	EINECS	231-714-2
Ammonium Dihydrogen Phosphate	7722-76-1	EINECS	231-764-5
Water	7732-18-5	EINECS	231-791-2
Ammonium Sulfate	7783-20-2	EINECS	231-984-1
Aluminum Nitrate Nonahydrate	7784-27-2	EINECS	"236-751-8" As Aluminium nitrate [13473-90-0]

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

Chemical Name	CAS Number	Status
Antimony Trioxide	1309-64-4	Present [29709]
Arsenic Trioxide	1327-53-3	Present [29706]
Iron	7439-89-6	Present [34355]
Lead	7439-92-1	Present [25764]
Manganese	7439-96-5	Present [24928]
Thallium	7440-28-0	Present [33902]
Cadmium	7440-43-9	Present [13601]
Zinc	7440-66-6	Present [35873]
Hydrofluoric Acid	7664-39-3	Present [27221]
Nitric Acid	7697-37-2	Present [35578]
Ammonium Dihydrogen Phosphate	7722-76-1	Present [22403]
Water	7732-18-5	Present [32224]
Ammonium Sulfate	7783-20-2	Present [23019]
Aluminum Nitrate Nonahydrate	7784-27-2	Present [21185]

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

Chemical Name	CAS Number	List	Status
Antimony Trioxide	1309-64-4	Annex 1	Present [KE-09846]
Antimony Trioxide	1309-64-4	Annex 3	"Present (97-1-176)" As Inorganic antimony compounds [RR-00554-9]
Arsenic Trioxide	1327-53-3	Annex 1	Present [KE-09858]
Arsenic Trioxide	1327-53-3	Annex 3	"Present (97-1-119)" As Arsenic compounds [RR-00625-7]
Iron	7439-89-6	Annex 1	Present [KE-21059]
Lead	7439-92-1	Annex 1	Present [KE-21887]
Manganese	7439-96-5	Annex 1	Present [KE-22999]
Thallium	7440-28-0	Annex 1	Present [KE-33716]
Cadmium	7440-43-9	Annex 1	Present [KE-04397]
Zinc	7440-66-6	Annex 1	Present [KE-35518]
Hydrofluoric Acid	7664-39-3	Annex 1	Present [KE-20198]
Nitric Acid	7697-37-2	Annex 1	Present [KE-25911]
Ammonium Dihydrogen Phosphate	7722-76-1	Annex 1	Present [KE-01656]
Water	7732-18-5	Annex 1	Present [KE-35400]
Ammonium Sulfate	7783-20-2	Annex 1	Present [KE-01743]
Aluminum Nitrate Nonahydrate	7784-27-2	Annex 1	"Present [KE-01007]" As Aluminum nitrate [13473-90-0]

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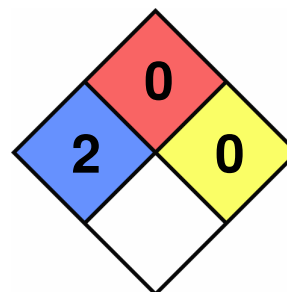
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Antimony Trioxide	1309-64-4	(1)-543
Arsenic Trioxide	1327-53-3	(1)-35, (9)-2400
Iron	7439-89-6	- (exempt)
Lead	7439-92-1	- (exempt)
Manganese	7439-96-5	- (exempt)
Thallium	7440-28-0	- (exempt)
Cadmium	7440-43-9	- (exempt)
Zinc	7440-66-6	- (exempt)
Hydrofluoric Acid	7664-39-3	(1)-306
Nitric Acid	7697-37-2	(1)-394
Ammonium Dihydrogen Phosphate	7722-76-1	(1)-379
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)
Ammonium Sulfate	7783-20-2	(1)-400
Aluminum Nitrate Nonahydrate	7784-27-2	(1)-20 (not considered as a new chemical substance)

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

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