

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: ICP Blend, 8 elements @ 1,000 ppm in 5% HNO₃

Product Number: RPMX017N

Other Identifying Product Numbers: RPMX017N-250N, RPMX017N-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

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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
Respiratory Sensitizer	Category 1	H334	P261, P285, P304+P341, P342+P311, P501
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, P501
Carcinogenicity	Category 1	H350	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Corrosive to Metals	Category 1	H290	P234, P390, P406

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.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350	May cause cancer.
H360	May damage fertility or the unborn child.

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Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original container.
P260	Do not breathe fumes, mist, vapors, or spray.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
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.
P304+P341	IF INHALED: If breathing is difficult, 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.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P321	Specific treatment (Wash areas of contact with water.).
P332+P313	If skin irritation occurs: Get medical attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or physician.
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	93.12
Nitric Acid	HNO ₃	63.01 g/mol	7697-37-2	4.86
Lithium Nitrate	LiNO ₃	68.94 g/mol	7790-69-4	0.95
Zirconyl Nitrate	ZrO(NO ₃) ₂ ·2H ₂ O	231.23 g/mol	13826-66-9	0.29
Strontium Nitrate	Sr(NO ₃) ₂	211.62 g/mol	10042-76-9	0.23
Selenium	Se	78.95 g/mol	7782-49-2	0.10
Cobalt	Co	58.93 g/mol	7440-48-4	0.10
Tin	Sn	118.71 g/mol	7440-31-5	0.10
Nickel	Ni	58.69 g/mol	7440-02-0	0.10
Molybdenum	Mo	95.95 g/mol	7439-98-7	0.10
Hydrofluoric Acid	HF	20.00 g/mol	7664-39-3	< 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: If breathing is difficult, 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. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. May damage fertility or the unborn child. CAUTION! Corrosive. Contains known and suspected carcinogens. 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.

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4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water.). 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 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

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.

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. In case of inadequate ventilation wear respiratory protection.

6.2. Cleanup and Containment Methods and Materials

Do not flush to sewer. Absorb with suitable material. Containerize for disposal with a hazardous waste disposal facility. 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
Zirconyl Nitrate (13826-66-9)	TLV-TWA	USA	"5 mg/m ³ TWA (as Zr)" As Zirconium compounds [RR-00624-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Zirconyl Nitrate (13826-66-9)	TLV-STEL	USA	"10 mg/m ³ STEL (as Zr)" As Zirconium compounds [RR-00624-6]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Zirconyl Nitrate (13826-66-9)	TWA	USA	"5 mg/m ³ TWA (as Zr)" As Zirconium compounds [RR-00624-6]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Zirconyl Nitrate (13826-66-9)	TWA	USA	5 mg/m ³ TWA (as Zr)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Zirconyl Nitrate (13826-66-9)	TLV-TWA	USA	5 mg/m ³ TWA (as Zr)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Zirconyl Nitrate (13826-66-9)	TLV-STEL	USA	10 mg/m ³ STEL (as Zr)	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Zirconyl Nitrate (13826-66-9)	TLV-STEL	USA	"10 mg/m ³ STEL (as Zr)" As Zirconium compounds [RR-00624-6]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Zirconyl Nitrate (13826-66-9)	TLV-TWA	USA	"5 mg/m ³ TWA (as Zr)" As Zirconium compounds [RR-00624-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Zirconyl Nitrate (13826-66-9)	TWA	USA	"5 mg/m ³ TWA (as Zr)" As Zirconium compounds [RR-00624-6]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Molybdenum (7439-98-7)	TWA	USA	"15 mg/m ³ TWA (total dust)" As Molybdenum, insoluble compounds [RR-00037-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Molybdenum (7439-98-7)	TLV-TWA	USA	10 mg/m ³ TWA (inhalable particulate matter); 3 mg/m ³ TWA (respirable particulate matter)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Molybdenum (7439-98-7)	TLV-TWA	USA	10 mg/m ³ TWA (inhalable particulate matter, as Mo); 3 mg/m ³ TWA (respirable particulate matter, as Mo)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Molybdenum (7439-98-7)	TWA	USA	15 mg/m ³ TWA (total dust)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	1.5 mg/m ³ TWA (inhalable particulate matter)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Nickel (7440-02-0)	TWA	USA	1 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nickel (7440-02-0)	TLV-TWA	USA	"1.5 mg/m ³ TWA (inhalable particulate matter)" As Nickel, elemental [7440-02-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	"1 mg/m ³ TWA" As Nickel [7440-02-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Tin (7440-31-5)	TWA	USA	"2 mg/m ³ TWA (except oxides, as Sn)" As Tin, inorganic compounds [RR-00043-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Tin (7440-31-5)	TLV-TWA	USA	2 mg/m ³ TWA (inhalable particulate matter)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Tin (7440-31-5)	TLV-TWA	USA	2 mg/m ³ TWA (excluding Tin hydride and Indium tin oxide, inhalable particulate matter, as Sn)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Tin (7440-31-5)	TWA	USA	2 mg/m ³ TWA (except oxides, as Sn)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Tin (7440-31-5)	TLV-TWA	USA	"2 mg/m ³ TWA (excluding Tin hydride and Indium tin oxide, inhalable particulate matter, as Sn)" As Tin inorganic compounds [RR-00043-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Tin (7440-31-5)	TWA	USA	"2 mg/m ³ TWA (except oxides, as Sn)" As Tin, inorganic compounds [RR-00043-1]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cobalt (7440-48-4)	TWA	USA	"0.1 mg/m ³ TWA (dust and fume)" As Cobalt metal [7440-48-4]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cobalt (7440-48-4)	TLV-TWA	USA	"0.02 mg/m ³ TWA (inhalable particulate matter)" As Cobalt [7440-48-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (7440-48-4)	TLV-TWA	USA	"0.02 mg/m ³ TWA (inhalable particulate matter)" As Cobalt [7440-48-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Cobalt (7440-48-4)	TWA	USA	"0.1 mg/m ³ TWA (dust and fume)" As Cobalt metal [7440-48-4]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cobalt (7440-48-4)	TLV-TWA	USA	"0.02 mg/m ³ TWA (inhalable particulate matter)" As Cobalt [7440-48-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (7440-48-4)	TWA	USA	"0.1 mg/m ³ TWA (dust and fume)" As Cobalt metal [7440-48-4]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cobalt (7440-48-4)	TLV-TWA	USA	0.02 mg/m ³ TWA (inhalable particulate matter)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (7440-48-4)	TWA	USA	0.1 mg/m ³ TWA (dust and fume)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cobalt (7440-48-4)	TLV-TWA	USA	0.02 mg/m ³ TWA (inhalable particulate matter, as Co)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	"3 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]; "2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	"2 ppm Ceiling (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	"0.5 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]; "2.5 mg/m ³ TWA (as F)" As Fluorides [RR-02792-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	"0.5 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	"3 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	"2 ppm Ceiling (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	0.5 ppm TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	2 ppm Ceiling (as F)	ACGIH - Threshold Limit Values - Ceilings (TLV-C)

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Hydrofluoric Acid (7664-39-3)	TWA	USA	3 ppm TWA (as F)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TWA	USA	2.5 mg/m ³ TWA (as F)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	2.5 mg/m ³ TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	"2 ppm Ceiling (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	"0.5 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	"3 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	"2 ppm Ceiling (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	"0.5 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	"3 ppm TWA (as F)" As Hydrogen fluoride [7664-39-3]	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)	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)

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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)
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)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	0.2 mg/m ³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA" As Selenium [7782-49-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TLV-TWA	USA	"0.2 mg/m ³ TWA (as Se)" As Selenium compounds [RR-00612-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenium (7782-49-2)	TWA	USA	"0.2 mg/m ³ TWA (as Se)" As Selenium compounds [RR-00612-2]	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: In case of inadequate ventilation wear 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. In case of inadequate ventilation wear respiratory 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: Red-brown liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: Data not available.

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: 1.05

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.

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. LD50, Oral, Rat: 1426 mg/kg (Lithium Nitrate), details of toxic effects not reported other than lethal dose value. LD50, Dermal, Rat: >2000 mg/kg (Lithium Nitrate), details of toxic effects not reported other than lethal dose value, 6700 mg/kg (Selenium), behavioral, respiratory and metabolic changes noted; LD50, Oral, Rat: 2500 mg/kg (Zirconyl Nitrate), behavioral effects noted. Selenium may be toxic at higher concentrations even though it is an essential trace element in the diet. Nickel is investigated as a tumorigen.

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.). 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:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

Skin Sensitization:

May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water.). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ Cell Mutagenicity:

Not applicable.

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Carcinogenicity:

May cause cancer. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Reproductive Toxicity:

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

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.

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.

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SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Sizes: 250 mL, 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: 250 mL, 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: 250 mL, 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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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

Hydrofluoric Acid (CAS # 7664-39-3): "100 lb EPCRA RQ" As Hydrogen fluoride [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): "100 lb TPQ" As Hydrogen fluoride [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): 100 lb EPCRA RQ

Hydrofluoric Acid (CAS # 7664-39-3): 100 lb TPQ

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

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

Nickel (CAS # 7440-02-0): "100 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 $>100\text{ }\mu\text{m}$); 45.4 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 Nickel [7440-02-0]

Nickel (CAS # 7440-02-0): 100 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 $>100\text{ }\mu\text{m}$); 45.4 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 $>100\text{ }\mu\text{m}$)

Hydrofluoric Acid (CAS # 7664-39-3): "100 lb final RQ; 45.4 kg final RQ" As Hydrofluoric acid [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): 100 lb final RQ; 45.4 kg final RQ

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

Selenium (CAS # 7782-49-2): "100 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 $>100\text{ }\mu\text{m}$); 45.4 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 Selenium [7782-49-2]

Selenium (CAS # 7782-49-2): 100 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 $>100\text{ }\mu\text{m}$); 45.4 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 $>100\text{ }\mu\text{m}$)



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

Strontium Nitrate (CAS # 10042-76-9): "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)" As Nitrate compounds, water dissociable [RR-03804-0]

Strontium Nitrate (CAS # 10042-76-9): 1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)

Nickel (CAS # 7440-02-0): "0.1 % de minimis concentration (includes any unique chemical substance that contains Nickel as part of that chemical's infrastructure, listed under Chemical Category N495)" As Nickel compounds [RR-00800-4]

Nickel (CAS # 7440-02-0): "0.1 % de minimis concentration" As Nickel [7440-02-0]

Nickel (CAS # 7440-02-0): 0.1 % de minimis concentration

Cobalt (CAS # 7440-48-4): "0.1 % de minimis concentration" As Cobalt [7440-48-4]

Cobalt (CAS # 7440-48-4): 0.1 % de minimis concentration

Cobalt (CAS # 7440-48-4): 0.1 % de minimis concentration (includes any unique chemical substance that contains Cobalt as part of that chemical's infrastructure, listed under Chemical Category N096)

Hydrofluoric Acid (CAS # 7664-39-3): "1.0 % de minimis concentration" As Hydrogen fluoride [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): 1.0 % de minimis concentration

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

Selenium (CAS # 7782-49-2): "1.0 % de minimis concentration (includes any unique chemical substance that contains Selenium as part of that chemical's infrastructure, listed under Chemical Category N725)" As Selenium compounds [RR-00612-2]

Selenium (CAS # 7782-49-2): "1.0 % de minimis concentration" As Selenium [7782-49-2]

Selenium (CAS # 7782-49-2): 1.0 % de minimis concentration

Lithium Nitrate (CAS # 7790-69-4): "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)

As Nitrate compounds, water dissociable [RR-03804-0]

Lithium Nitrate (CAS # 7790-69-4)

15.5. Massachusetts Right-to-Know Substance List

Strontium Nitrate (CAS # 10042-76-9): "Present" As Strontium nitrate [10042-76-9]

Strontium Nitrate (CAS # 10042-76-9): Present

Molybdenum (CAS # 7439-98-7): Present

Nickel (CAS # 7440-02-0): "Carcinogen; Extraordinarily hazardous" As Nickel [7440-02-0]

Nickel (CAS # 7440-02-0): Carcinogen; Extraordinarily hazardous

Tin (CAS # 7440-31-5): Present

Cobalt (CAS # 7440-48-4): "Present" As Cobalt [7440-48-4]

Cobalt (CAS # 7440-48-4): Present

Hydrofluoric Acid (CAS # 7664-39-3): "Extraordinarily hazardous" As Hydrofluoric acid [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): Extraordinarily hazardous

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

Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous

Selenium (CAS # 7782-49-2): "Present" As Selenium [7782-49-2]

Selenium (CAS # 7782-49-2): Present

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15.6. Pennsylvania Right-to-Know Hazardous Substances

Strontium Nitrate (CAS # 10042-76-9): "Present" As Nitric acid, strontium salt [10042-76-9]

Strontium Nitrate (CAS # 10042-76-9): Present

Molybdenum (CAS # 7439-98-7): Present

Nickel (CAS # 7440-02-0): "Environmental hazard" As Nickel compounds [RR-00800-4]

Nickel (CAS # 7440-02-0): "Environmental hazard; Special hazardous substance" As Nickel [7440-02-0]

Nickel (CAS # 7440-02-0): "Present" As Nickel [7440-02-0]

Nickel (CAS # 7440-02-0): "Present" As Nickel compounds [RR-00800-4]

Nickel (CAS # 7440-02-0): Environmental hazard

Nickel (CAS # 7440-02-0): Environmental hazard; Special hazardous substance

Nickel (CAS # 7440-02-0): Present

Tin (CAS # 7440-31-5): Present

Cobalt (CAS # 7440-48-4): "Environmental hazard" As Cobalt compounds [RR-00107-0]

Cobalt (CAS # 7440-48-4): "Environmental hazard; Present (fume)" As Cobalt [7440-48-4]

Cobalt (CAS # 7440-48-4): "Present" As Cobalt [7440-48-4]

Cobalt (CAS # 7440-48-4): "Present" As Cobalt compounds [RR-00107-0]

Cobalt (CAS # 7440-48-4): Environmental hazard; Present (fume)

Cobalt (CAS # 7440-48-4): Present

Hydrofluoric Acid (CAS # 7664-39-3): "Environmental hazard" As Hydrofluoric acid [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): "Present" As Hydrofluoric acid [7664-39-3]

Hydrofluoric Acid (CAS # 7664-39-3): Environmental hazard

Hydrofluoric Acid (CAS # 7664-39-3): 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

Selenium (CAS # 7782-49-2): "Environmental hazard" As Selenium [7782-49-2]

Selenium (CAS # 7782-49-2): "Environmental hazard" As Selenium compounds [RR-00612-2]

Selenium (CAS # 7782-49-2): "Present" As Selenium [7782-49-2]

Selenium (CAS # 7782-49-2): "Present" As Selenium compounds [RR-00612-2]

Selenium (CAS



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

Strontium Nitrate (CAS # 10042-76-9): "sn 1743" As Strontium nitrate [10042-76-9]
Strontium Nitrate (CAS # 10042-76-9): "SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]
Strontium Nitrate (CAS # 10042-76-9): "sn 3722" As Nitrate compounds [RR-01770-9]
Strontium Nitrate (CAS # 10042-76-9): sn 1743
Strontium Nitrate (CAS # 10042-76-9): sn 3722
Strontium Nitrate (CAS # 10042-76-9): SN 3722 500 lb TPQ (water dissociable, Category Code N511)
Zirconyl Nitrate (CAS # 13826-66-9): "SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]
Zirconyl Nitrate (CAS # 13826-66-9): "sn 3722" As Nitrate compounds [RR-01770-9]
Zirconyl Nitrate (CAS # 13826-66-9): sn 3722
Zirconyl Nitrate (CAS # 13826-66-9): SN 3722 500 lb TPQ (water dissociable, Category Code N511)
Molybdenum (CAS # 7439-98-7): sn 1309
Nickel (CAS # 7440-02-0): "carcinogen" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): "carcinogen" As Nickel compounds [RR-00800-4]
Nickel (CAS # 7440-02-0): "SN 1341 500 lb TPQ" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): "sn 1341" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): "SN 2366 500 lb TPQ (Category Code N495. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Nickel compounds [RR-00800-4]
Nickel (CAS # 7440-02-0): "sn 2366" As Nickel compounds [RR-00800-4]
Nickel (CAS # 7440-02-0): carcinogen
Nickel (CAS # 7440-02-0): sn 1341
Nickel (CAS # 7440-02-0): SN 1341 500 lb TPQ
Tin (CAS # 7440-31-5): flammable - third degree
Tin (CAS # 7440-31-5): sn 1858
Cobalt (CAS # 7440-48-4): "carcinogen" As Cobalt compounds [RR-00107-0]
Cobalt (CAS # 7440-48-4): "carcinogen; flammable - third degree" As Cobalt [7440-48-4]
Cobalt (CAS # 7440-48-4): "SN 0520 500 lb TPQ" As Cobalt [7440-48-4]
Cobalt (CAS # 7440-48-4): "sn 0520" As Cobalt [7440-48-4]
Cobalt (CAS # 7440-48-4): "SN 2222 500 lb TPQ (Category Code N096. Includes any unique chemical substance

15.8. California Proposition 65

Nickel (CAS # 7440-02-0): "carcinogen, 10/1/1989 (metallic)" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): "carcinogen, 5/7/2004" As Nickel compounds [RR-00800-4]
Nickel (CAS # 7440-02-0): carcinogen, 10/1/1989 (metallic)
Cobalt (CAS # 7440-48-4): "carcinogen, 7/1/1992 (powder)" As Cobalt metal [7440-48-4]
Cobalt (CAS # 7440-48-4): carcinogen, 7/1/1992 (powder)

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

Strontium Nitrate (CAS # 10042-76-9): "Present" As Strontium nitrate [10042-76-9] (DSL)

Strontium Nitrate (CAS # 10042-76-9): Present (DSL)

Zirconyl Nitrate (CAS # 13826-66-9): "Present" As Zirconyl nitrate [13826-66-9] (DSL)

Zirconyl Nitrate (CAS # 13826-66-9): Present (DSL)

Molybdenum (CAS # 7439-98-7): Present (DSL)

Nickel (CAS # 7440-02-0): "Present" As Nickel [7440-02-0] (DSL)

Nickel (CAS # 7440-02-0): Present (DSL)

Tin (CAS # 7440-31-5): Present (DSL)

Cobalt (CAS # 7440-48-4): "Present" As Cobalt [7440-48-4] (DSL)

Cobalt (CAS # 7440-48-4): Present (DSL)

Hydrofluoric Acid (CAS # 7664-39-3): "Present" As Hydrogen fluoride [7664-39-3] (DSL)

Hydrofluoric Acid (CAS # 7664-39-3): Present (DSL)

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

Nitric Acid (CAS # 7697-37-2): Present (DSL)

Water (CAS # 7732-18-5): "Present" As Water [7732-18-5] (DSL)

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

Selenium (CAS # 7782-49-2): "Present" As Selenium [7782-49-2] (DSL)

Selenium (CAS # 7782-49-2): Present (DSL)

Lithium Nitrate (CAS # 7790-69-4): "Present" As Lithium nitrate [7790-69-4] (DSL)

Lithium Nitrate (CAS # 7790-69-4): 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.



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Strontium Nitrate (CAS # 10042-76-9): "Present (ACTIVE)" As Nitric acid, strontium salt (2:1) [10042-76-9]
Strontium Nitrate (CAS # 10042-76-9): Present (ACTIVE)
Zirconyl Nitrate (CAS # 13826-66-9): "Present (ACTIVE)" As Zirconium, bis(nitrato-.kappa.O)oxo- [13826-66-9]
Zirconyl Nitrate (CAS # 13826-66-9): Present (ACTIVE)
Molybdenum (CAS # 7439-98-7): Present (ACTIVE)
Nickel (CAS # 7440-02-0): "Present (ACTIVE)" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): Present (ACTIVE)
Tin (CAS # 7440-31-5): Present (ACTIVE)
Cobalt (CAS # 7440-48-4): "Present (ACTIVE)" As Cobalt [7440-48-4]
Cobalt (CAS # 7440-48-4): Present (ACTIVE)
Hydrofluoric Acid (CAS # 7664-39-3): "Present (ACTIVE)" As Hydrofluoric acid [7664-39-3]
Hydrofluoric Acid (CAS # 7664-39-3): Present (ACTIVE)
Nitric Acid (CAS # 7697-37-2): "Present (ACTIVE)" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): Present (ACTIVE)
Water (CAS # 7732-18-5): "Present (ACTIVE)" As Water [7732-18-5]
Water (CAS # 7732-18-5): Present (ACTIVE)
Selenium (CAS # 7782-49-2): "Present (ACTIVE)" As Selenium [7782-49-2]
Selenium (CAS # 7782-49-2): Present (ACTIVE)
Lithium Nitrate (CAS # 7790-69-4): "Present (ACTIVE)" As Nitric acid, lithium salt (1:1) [7790-69-4]
Lithium Nitrate (CAS # 7790-69-4): 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)

Strontium Nitrate (CAS # 10042-76-9): "233-131-9" As Strontium nitrate [10042-76-9]
Strontium Nitrate (CAS # 10042-76-9): 233-131-9
Zirconyl Nitrate (CAS # 13826-66-9): "237-529-3" As Zirconium dinitrate oxide [13826-66-9]
Zirconyl Nitrate (CAS # 13826-66-9): 237-529-3
Molybdenum (CAS # 7439-98-7): 231-107-2
Nickel (CAS # 7440-02-0): "231-111-4" As Nickel [7440-02-0]
Nickel (CAS # 7440-02-0): 231-111-4
Tin (CAS # 7440-31-5): 231-141-8
Cobalt (CAS # 7440-48-4): "231-158-0" As Cobalt [7440-48-4]
Cobalt (CAS # 7440-48-4): 231-158-0
Hydrofluoric Acid (CAS # 7664-39-3): "231-634-8" As Hydrogen fluoride [7664-39-3]
Hydrofluoric Acid (CAS # 7664-39-3): 231-634-8
Nitric Acid (CAS # 7697-37-2): "231-714-2" As Nitric acid [7697-37-2]
Nitric Acid (CAS # 7697-37-2): 231-714-2
Water (CAS # 7732-18-5): "231-791-2" As Water [7732-18-5]
Water (CAS # 7732-18-5): 231-791-2
Selenium (CAS # 7782-49-2): "231-957-4" As Selenium [7782-49-2]
Selenium (CAS # 7782-49-2): 231-957-4
Lithium Nitrate (CAS # 7790-69-4): "232-218-9" As Lithium nitrate [7790-69-4]
Lithium Nitrate (CAS # 7790-69-4): 232-218-9

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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. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. May damage fertility or the unborn child.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. 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. IF exposed or concerned: Get medical attention. Specific treatment (Wash areas of contact with water.). If skin irritation occurs: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician. 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.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

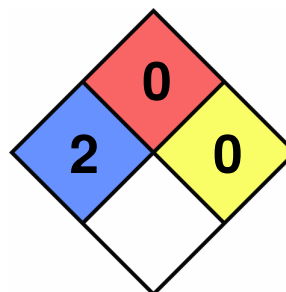
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

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:	





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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.