Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Interference Ck Std, 15 element

Product Number: RINFCK15
Other Identifying Product Numbers: RINFCK15-100N

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

Product Number: RINFCK15 Page 1 of 28



Safety Data Sheet

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	
Hazard Class	Category	Statements	Precautionary Statements:
Acute Toxicity - Inhalation	Category 1	H330	P260, P271, P285, P304+P340, P310, P320, P403+P233, P405, P501
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
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Corrosive to Metals	Category 1	H290	P234, P390, P406
Hazardous to the Aquatic Environment (Acute)	Category 2	H401	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 2	H411	P273, P391, P501

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.
H330	Fatal if inhaled.
H360	May damage fertility or the unborn child.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Product Number: RINFCK15 Page 2 of 28

Precautionary Statements:

Drescutionery Number	Draggitionary Statement
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.
P264	Wash arms, hands and face thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
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.
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.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P320	Specific treatment is urgent (Wash areas of contact with water immediately).
P321	Specific treatment (Wash areas of contact with water immediately).
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
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.

Product Number: RINFCK15 Page 3 of 28



Safety Data Sheet

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	72.09
Aluminum Nitrate Nonahydrate	AI(NO ₃) ₃ ·9H ₂ O	375.13 g/mol	7784-27-2	13.24
Nitric Acid	HNO ₃	63.01 g/mol	7697-37-2	11.02
Magnesium	Mg	24.30 g/mol	7439-95-4	0.95
Lead	Pb	207.2 g/mol	7439-92-1	0.95
Iron	Fe	55.84 g/mol	7439-89-6	0.95
Ammonium Dihydrogen Phosphate	NH ₄ H ₂ PO ₄	97.99 g/mol	7722-76-1	0.35
Calcium Carbonate	CaCO ₃	100.09 g/mol	471-34-1	0.24
Manganese	Mn	54.93 g/mol	7439-96-5	0.10
Ammonium Dichromate	$(NH_4)_2Cr_2O_7$	252.06 g/mol	7789-09-5	< 0.1
Ammonium Metavanadate	NH ₄ VO ₃	116.97 g/mol	7803-55-6	< 0.1
Zinc	Zn	65.40 g/mol	7440-66-6	< 0.1
Copper	Cu	63.54 g/mol	7440-50-8	< 0.1
Cobalt	Со	58.93 g/mol	7440-48-4	< 0.1
Cadmium	Cd	112.41 g/mol	7440-43-9	< 0.1
Arsenic	As	74.92 g/mol	7440-38-2	< 0.1
Nickel	Ni	58.69 g/mol	7440-02-0	< 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.

Product Number: RINFCK15 Page 4 of 28

4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes severe skin burns and eye damage. Causes serious eye damage. Fatal if inhaled. May damage fertility or the unborn child. Contains low levels of known and suspected carcinogens. Corrosive Liquid. May be fatal if swallowed. 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. Potential symptoms of overexposure are irritation of the eyes, mucous membranes and skin, dental erosion, bronchitis, pneumonitis, delayed pulmonary edema. 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 is urgent (Wash areas of contact with water immediately). 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. Immediately flush with plenty of water for at least 15 minutes. Remove any contaminated clothing. Wash with soap and water, then flush again with water. 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

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.

Product Number: RINFCK15 Page 5 of 28



SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Lead (7439-92-1)	PEL	USA	30 μg/m³ Action Level (See 29 CFR 1910.1025); 50 μg/m³ TWA	U.S OSHA - Specifically Regulated Chemicals with PELs
Lead (7439-92-1)	TLV-TWA	USA	0.05 mg/m³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Lead (7439-92-1)	TWA	USA	50 μg/m³ TWA	U.S OSHA - Final PELs - Time Weighted Averages (TWAs)
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m³ 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/m³ TWA (respirable particulate matter); 0.1 mg/m³ TWA (inhalable particulate matter)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese (7439-96-5)	PEL-Ceiling	USA	5 mg/m³ Ceiling (fume)	U.S OSHA - Final PELs - Ceiling Limits
Manganese (7439-96-5)	PEL-Ceiling	USA	"5 mg/m³ Ceiling (as Mn)" As Manganese compounds [RR-00602-0]	U.S OSHA - Final PELs - Ceiling Limits

Product Number: RINFCK15 Page 6 of 28



Safety Data Sheet

Manganese (7439-96-5)	TLV-TWA	USA	0.02 mg/m³ TWA	ACGIH - Threshold Limit Values - Time
			(respirable particulate	Weighted Averages (TLV-TWA)
			matter, as Mn); 0.1 mg/m ³	
			TWA (inhalable particulate	
NU 1 1 (= 440.00.0)	T1 17 T14/A	1104	matter, as Mn)	
Nickel (7440-02-0)	TLV-TWA	USA	1.5 mg/m³ TWA (inhalable	ACGIH - Threshold Limit Values - Time
NII I I (= 440.00.0)			particulate matter)	Weighted Averages (TLV-TWA)
Nickel (7440-02-0)	TWA	USA	1 mg/m³ TWA	U.S OSHA - Final PELs - Time
(=	T 14/4		#40 / 0 TN44 / A NI 4	Weighted Averages (TWAs)
Arsenic (7440-38-2)	TWA	USA	"10 μg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
/=			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m³ TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 µg/m³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 µg/m³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 μg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m³ TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 μg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m³ TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	

Product Number: RINFCK15 Page 7 of 28



Safety Data Sheet

Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
, ,		-	CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 µg/m³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
,			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 μg/m ³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m3 TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 μg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 μg/m ³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m³ TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 µg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m3 TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 µg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	

Product Number: RINFCK15 Page 8 of 28



Safety Data Sheet

Arsenic (7440-38-2)	PEL	USA	"10 µg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 μg/m ³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 μg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m³ TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 μg/m ³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 μg/m³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m³ TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 μg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 μg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m³ TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	

Product Number: RINFCK15 Page 9 of 28



Safety Data Sheet

Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 μg/m ³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	0.01 mg/m ³ TWA	ACGIH - Threshold Limit Values - Time
				Weighted Averages (TLV-TWA)
Arsenic (7440-38-2)	PEL	USA	"10 μg/m³ TWA (See 29	U.S OSHA - Specifically Regulated
			CFR 1910.1018; except	Chemicals with PELs
			Arsine, as As); 5 μg/m ³	
			Action Level (as As)" As	
			Inorganic arsenic	
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TLV-TWA	USA	"0.01 mg/m3 TWA (as As)"	ACGIH - Threshold Limit Values - Time
			As Arsenic inorganic	Weighted Averages (TLV-TWA)
			compounds [RR-00065-7]	
Arsenic (7440-38-2)	TWA	USA	"10 μg/m³ TWA (as As)" As	U.S OSHA - Final PELs - Time
			Arsenic, inorganic	Weighted Averages (TWAs)
			compounds [RR-00065-7]	
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR	U.S OSHA - Specifically Regulated
			1910.1027, as Cd); 2.5	Chemicals with PELs
			μg/m³ Action Level (as Cd)"	
			As Cadmium compounds	
			[RR-00559-4]	
Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd);	ACGIH - Threshold Limit Values - Time
			0.002 mg/m ³ TWA	Weighted Averages (TLV-TWA)
			(respirable particulate	
			matter, as Cd)" As	
			Cadmium compounds	
			[RR-00559-4]	
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR	U.S OSHA - Specifically Regulated
,			1910.1027, as Cd); 2.5	Chemicals with PELs
			μg/m³ Action Level (as Cd)"	
			As Cadmium compounds	
			[RR-00559-4]	

Product Number: RINFCK15 Page 10 of 28



Safety Data Sheet

Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Product Number: RINFCK15 Page 11 of 28



Safety Data Sheet

Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs

Product Number: RINFCK15 Page 12 of 28



Safety Data Sheet

Cadmium (7440-43-9) Cadmium (7440-43-9) Cadmium (7440-43-9)	PEL	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4] 5 µg/m³ TWA (See 29 CFR 1910.1027); 2.5 µg/m³ Action Level	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) U.S OSHA - Specifically Regulated Chemicals with PELs ACGIH - Threshold Limit Values - Time
Caumum (1440-43-3)	TLV-TWA	USA	0.01 mg/m³ TWA; 0.002 mg/m³ TWA (respirable particulate matter)	Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	PEL-Ceiling	USA	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 - Final PELs - Ceiling Limits
Cadmium (7440-43-9)	TWA	USA	5 μg/m³ TWA	U.S OSHA - Final PELs - Time Weighted Averages (TWAs)
Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA (respirable particulate matter, as Cd)" As Cadmium compounds [RR-00559-4]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	PEL	USA	"5 μg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m³ Action Level (as Cd)" As Cadmium compounds [RR-00559-4]	U.S OSHA - Specifically Regulated Chemicals with PELs

Product Number: RINFCK15 Page 13 of 28



Safety Data Sheet

Cadmium (7440-43-9)	TLV-TWA	USA	"0.01 mg/m³ TWA (as Cd); 0.002 mg/m³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
			(respirable particulate	Weighted Averages (TEV-TWA)
			matter, as Cd)" As	
			Cadmium compounds	
			[RR-00559-4]	
Cobalt (7440-48-4)	TWA	USA	0.1 mg/m³ TWA (dust and	U.S OSHA - Final PELs - Time
			fume)	Weighted Averages (TWAs)
Cobalt (7440-48-4)	TLV-TWA	USA	0.02 mg/m³ TWA (inhalable	ACGIH - Threshold Limit Values - Time
			particulate matter)	Weighted Averages (TLV-TWA)
Cobalt (7440-48-4)	TLV-TWA	USA	0.02 mg/m³ TWA (inhalable	ACGIH - Threshold Limit Values - Time
			particulate matter, as Co)	Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	0.1 mg/m³ TWA (fume); 1	U.S OSHA - Final PELs - Time
			mg/m³ TWA (dust and mist)	Weighted Averages (TWAs)
Copper (7440-50-8)	TLV-TWA	USA	0.2 mg/m³ TWA (fume)	ACGIH - Threshold Limit Values - Time
				Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TLV-TWA	USA	"1 mg/m3 TWA (dust and	ACGIH - Threshold Limit Values - Time
			mist, as Cu)" As Copper	Weighted Averages (TLV-TWA)
			compounds [RR-00595-8]	
Copper (7440-50-8)	TLV-TWA	USA	"1 mg/m³ TWA (dust and	ACGIH - Threshold Limit Values - Time
			mist, as Cu)" As Copper	Weighted Averages (TLV-TWA)
			compounds [RR-00595-8]	
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)	TLV-TWA	USA	2 ppm TWA	ACGIH - Threshold Limit Values - Time
				Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	4 ppm STEL	ACGIH - Threshold Limit Values -
				Short Term Exposure Limits
				(TLV-STEL)
Ammonium Dichromate (7789-09-5)	PEL-Ceiling	USA	"0.1 mg/m³ Ceiling (applies	U.S OSHA - Final PELs - Ceiling
			to any operations or sectors	Limits
			for which the Hexavalent	
			Chromium standard [29	
			CFR 1910.1026] is stayed	
			or is otherwise not in effect,	
			as CrO3)" As Chromates	
			[RR-01554-3]	

Product Number: RINFCK15 Page 14 of 28



Safety Data Sheet

TLV-TWA	USA	"0.0002 mg/m ³ TWA	ACGIH - Threshold Limit Values - Time
		(inhalable particulate	Weighted Averages (TLV-TWA)
		matter, as Cr(VI))" As	
		Hexavalent chromium	
		inorganic water-soluble	
		•	
TLV-STEL	USA	<u> </u>	ACGIH - Threshold Limit Values -
		<u> </u>	Short Term Exposure Limits
		·	(TLV-STEL)
			- /
		•	
TWA	USA	<u> </u>	U.S OSHA - Final PELs - Time
		. •	Weighted Averages (TWAs)
		` '	and grade the stage of the stag
PEL	USA	<u> </u>	U.S OSHA - Specifically Regulated
		, -	Chemicals with PELs
		•	
		,	
		` '	
TWA	USA		U.S OSHA - Final PELs - Time
		. •	Weighted Averages (TWAs)
		` ' '	and grade the stage of the stag
PEL	USA	<u> </u>	U.S OSHA - Specifically Regulated
		, ,	Chemicals with PELs
		•	
		, , ,	
		, ,	
PEL	USA		U.S OSHA - Specifically Regulated
		. •	Chemicals with PELs
TWA	USA		U.S OSHA - Final PELs - Time
		10	Weighted Averages (TWAs)
PEL-Ceiling	USA	0.1 mg/m³ Ceiling (applies	U.S OSHA - Final PELs - Ceiling
J		to any operations or sectors	Limits
		for which the Hexavalent	
		Chromium standard [29	
		•	
		or is otherwise not in effect,	
		as CrO3)	
	TLV-STEL TWA PEL PEL TWA	TLV-STEL USA TWA USA TWA USA PEL USA PEL USA TWA USA	(inhalable particulate matter, as Cr(VI))" As Hexavalent chromium inorganic water-soluble compounds [RR-53130-6] TLV-STEL USA "0.0005 mg/m³ STEL (inhalable particulate matter, as Cr(VI))" As Hexavalent chromium inorganic water-soluble compounds [RR-53130-6] TWA USA "5 µg/m³ TWA" As Chromium(VI) compounds [RR-00026-0] PEL USA "5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0] TWA USA "5 µg/m³ TWA" As Chromium(VI) compounds [RR-00026-0] PEL USA "5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0] PEL USA "5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0] PEL USA 5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr) TWA USA 5 µg/m³ TWA PEL-Ceiling USA 0.1 mg/m³ Ceiling (applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect,

Product Number: RINFCK15 Page 15 of 28



Safety Data Sheet

Ammonium Dichromate (7789-09-5)	TWA	USA	"5 μg/m³ TWA" As	U.S OSHA - Final PELs - Time
			Chromium(VI) compounds	Weighted Averages (TWAs)
			[RR-00026-0]	
Ammonium Dichromate (7789-09-5)	PEL	USA	"5 μg/m³ TWA (See 29 CFR	U.S OSHA - Specifically Regulated
			1910.1026, as Cr); 2.5	Chemicals with PELs
			μg/m³ Action Level (as Cr)"	
			As Chromium(VI)	
			compounds [RR-00026-0]	
Ammonium Dichromate (7789-09-5)	PEL	USA	"5 μg/m³ TWA (See 29 CFR	U.S OSHA - Specifically Regulated
			1910.1026, as Cr); 2.5	Chemicals with PELs
			μg/m³ Action Level (as Cr)"	
			As Chromium(VI)	
			compounds [RR-00026-0]	
Ammonium Dichromate (7789-09-5)	TWA	USA	"5 μg/m³ TWA" As	U.S OSHA - Final PELs - Time
			Chromium(VI) compounds	Weighted Averages (TWAs)
			[RR-00026-0]	
Ammonium Dichromate (7789-09-5)	PEL	USA	"5 μg/m³ TWA (See 29 CFR	U.S OSHA - Specifically Regulated
			1910.1026, as Cr); 2.5	Chemicals with PELs
			μg/m³ Action Level (as Cr)"	
			As Chromium(VI)	
			compounds [RR-00026-0]	
Ammonium Dichromate (7789-09-5)	TWA	USA	"5 μg/m³ TWA" As	U.S OSHA - Final PELs - Time
			Chromium(VI) compounds	Weighted Averages (TWAs)
			[RR-00026-0]	
Ammonium Dichromate (7789-09-5)	TLV-TWA	USA	0.0002 mg/m ³ TWA	ACGIH - Threshold Limit Values - Time
			(inhalable particulate	Weighted Averages (TLV-TWA)
			matter, as Cr(VI))	
Ammonium Dichromate (7789-09-5)	TLV-STEL	USA	0.0005 mg/m³ STEL	ACGIH - Threshold Limit Values -
			(inhalable particulate	Short Term Exposure Limits
			matter, as Cr(VI))	(TLV-STEL)

8.2. Exposure Controls

Engineering Controls: Use only outdoors or in a well-ventilated area. 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.

Product Number: RINFCK15 Page 16 of 28



SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Clear to slight yellow

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: 1.05

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.

Product Number: RINFCK15 Page 17 of 28

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:

Fatal if inhaled. Do not breathe fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water immediately). Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Other Information:

LDLo, Oral, Human: 430 mg/kg (Nitric Acid), details of toxic effects not reported other than lethal dose value. Beryllium and Nickel are investigated as tumorigens. LD50, Oral, Rat: (Antimony Trioxide) >34600 mg/kg, behavioral and skin effects noted. Antimony Trioxide is investigated as a tumorigen. LD50, Oral, Rat: 14.6 mg/kg (Arsenic Trioxide), 2330 mg/kg (Cadmium) 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.

Product Number: RINFCK15 Page 18 of 28

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

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations.

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.

Product Number: RINFCK15 Page 19 of 28



SECTION 14: Transportation Information

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

Sizes: 100 mL

UN Number: UN3264

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

Hazard Class: 8

Packing Group: |||

Hazard Label(s):



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

Sizes: 100 mL

UN Number: UN3264

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

Hazard Class: 8

Packing Group: |||

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 100 mL

UN Number: UN3264

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

Hazard Class: 8

Packing Group: |||

Hazard Label(s):



Product Number: RINFCK15 Page 20 of 28

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Lead (CAS # 7439-92-1): 30 μg/m3 Action Level (See 29 CFR 1910.1025); 50 μg/m3 TWA (See 29 CFR 1910.1025)

Arsenic (CAS # 7440-38-2): "10 μ g/m3 TWA (See 29 CFR 1910.1018, except Arsine, as As); 5 μ g/m3 Action Level (See 29 CFR 1910.1018, except Arsine, as As)" As Inorganic arsenic compounds [RR-00065-7]

Cadmium (CAS # 7440-43-9): "5 μg/m3 TWA (See 29 CFR 1910.1027, as Cd); 2.5 μg/m3 Action Level (as Cd)" As Cadmium compounds [RR-00559-4]

Cadmium (CAS # 7440-43-9): 5 μ g/m3 TWA (See 29 CFR 1910.1027); 2.5 μ g/m3 Action Level

Ammonium Dichromate (CAS # 7789-09-5): "5 μ g/m3 TWA (See 29 CFR 1910.1026, as Cr); 2.5 μ g/m3 Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]

Ammonium Dichromate (CAS # 7789-09-5): 5 μg/m3 TWA (See 29 CFR 1910.1026, as Cr); 2.5 μg/m3 Action Level (as Cr)

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

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

Lead (CAS # 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 μ m); 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 μ m)

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 μ 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 μ m)

Arsenic (CAS # 7440-38-2): 1 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 $>100 \mu m$); 0.454 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 $>100 \mu m$)

Arsenic (CAS # 7440-38-2): 1 lb final RQ; 0.454 kg final RQ

Cadmium (CAS # 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 $>100 \mu m$); 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 $>100 \mu m$)

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 $>100 \mu m$); 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 $>100 \mu m$)

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 $>100 \mu m$); 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the

Product Number: RINFCK15 Page 21 of 28



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

Lead (CAS # 7439-92-1): 0.1 % Supplier notification limit; 0.1 % de minimis concentration (when contained in stainless steel, brass, or bronze)

Lead (CAS # 7439-92-1): 100 lb RT (this lower threshold does not apply to lead when it is contained in stainless steel, brass or bronze alloy)

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

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

Arsenic (CAS # 7440-38-2): "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]

Arsenic (CAS # 7440-38-2): 0.1 % de minimis concentration

Cadmium (CAS # 7440-43-9): "0.1 % de minimis concentration (includes any unique chemical substance that contains Cadmium as part of that chemical's infrastructure, listed under Chemical Category N078)" As Cadmium compounds [RR-00559-4]

Cadmium (CAS # 7440-43-9): 0.1 % de minimis concentration

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)

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 sub

15.5. Massachusetts Right-to-Know Substance List

Lead (CAS # 7439-92-1): Teratogen

Magnesium (CAS # 7439-95-4): Present

Manganese (CAS # 7439-96-5): Present

Nickel (CAS # 7440-02-0): Carcinogen; Extraordinarily hazardous Arsenic (CAS # 7440-38-2): Carcinogen; Extraordinarily hazardous Cadmium (CAS # 7440-43-9): Carcinogen; Extraordinarily hazardous

Cobalt (CAS # 7440-48-4): Present Copper (CAS # 7440-50-8): Present Zinc (CAS # 7440-66-6): Present

Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous Ammonium Dichromate (CAS # 7789-09-5): Present Ammonium Metavanadate (CAS # 7803-55-6): Present

Product Number: RINFCK15 Page 22 of 28



Safety Data Sheet

15.6. Pennsylvania Right-to-Know Hazardous Substances

Lead (CAS # 7439-92-1): Environmental hazard

Lead (CAS # 7439-92-1): Present

Magnesium (CAS # 7439-95-4): Present

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

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

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

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

Arsenic (CAS # 7440-38-2): "Environmental hazard" As Arsenic compounds [RR-00625-7]

Arsenic (CAS # 7440-38-2): "Present" As Arsenic compounds [RR-00625-7]

Arsenic (CAS # 7440-38-2): Environmental hazard (including inorganic); Special hazardous substance

Arsenic (CAS # 7440-38-2): Present

Arsenic (CAS # 7440-38-2): Present (including inorganic)

Cadmium (CAS # 7440-43-9): "Environmental hazard" As Cadmium compounds [RR-00559-4]

Cadmium (CAS # 7440-43-9): "Present" As Cadmium compounds [RR-00559-4]

Cadmium (CAS # 7440-43-9): Environmental hazard (dust; fume; metal; powder); Special hazardous substance (metal; powder)

Cadmium (CAS # 7440-43-9): Present (dust; fume; metal; powder)

Cadmium (CAS # 7440-43-9): Present (metal; powder)

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

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

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

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 compounds [RR-005

Product Number: RINFCK15 Page 23 of 28

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

Lead (CAS # 7439-92-1): carcinogen; teratogen

Lead (CAS # 7439-92-1): sn 1096

Lead (CAS # 7439-92-1): SN 1096 500 lb TPQ

Magnesium (CAS # 7439-95-4): sn 1136

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

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

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

Arsenic (CAS # 7440-38-2): "SN 2138 500 lb TPQ (Category Code N020. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Arsenic compounds [RR-00625-7]

part of that chemical structure). As Arsenic compounds [1111-00025-7]

Arsenic (CAS # 7440-38-2): "sn 2138" As Arsenic compounds [RR-00625-7]

Arsenic (CAS # 7440-38-2): carcinogen; teratogen

Arsenic (CAS # 7440-38-2): sn 0152

Arsenic (CAS # 7440-38-2): SN 0152 500 lb TPQ

Cadmium (CAS # 7440-43-9): "carcinogen" As Cadmium compounds [RR-00559-4]

Cadmium (CAS # 7440-43-9): "SN 2199 500 lb TPQ (Category Code N078. Includes any unique chemical substance that contains the named metal

as part of that chemical structure)" As Cadmium compounds [RR-00559-4]

Cadmium (CAS # 7440-43-9): "sn 2199" As Cadmium compounds [RR-00559-4]

Cadmium (CAS # 7440-43-9): carcinogen; flammable - third degree; teratogen

Cadmium (CAS # 7440-43-9): sn 0305

Cadmium (CAS # 7440-43-9): SN 0305 500 lb TPQ

Cobalt (CAS # 7440-48-4): "carcinog

Product Number: RINFCK15 Page 24 of 28

Safety Data Sheet

15.8. California Proposition 65

Lead (CAS # 7439-92-1): 15 μ g/day NSRL (oral)

Lead (CAS # 7439-92-1): carcinogen, 10/1/1992

Lead (CAS # 7439-92-1): developmental toxicity, 2/27/1987 Lead (CAS # 7439-92-1): female reproductive toxicity 2/27/87

Lead (CAS # 7439-92-1): male reproductive toxicity, 2/27/87

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)

Arsenic (CAS # 7440-38-2): "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]

Arsenic (CAS # 7440-38-2): "carcinogen, 2/27/1987" As Arsenic, inorganic compounds [RR-00065-7]

Arsenic (CAS # 7440-38-2): 0.06 μg/day NSRL (inhalation); 10 μg/day NSRL (except inhalation)

Cadmium (CAS # 7440-43-9): "carcinogen, 10/1/1987" As Cadmium compounds [RR-00559-4]

Cadmium (CAS # 7440-43-9): 0.05 µg/day NSRL (inhalation)

Cadmium (CAS # 7440-43-9): carcinogen, 10/1/1987

Cadmium (CAS # 7440-43-9): developmental toxicity, 5/1/1997

Cadmium (CAS # 7440-43-9): male reproductive toxicity, 5/1/97

Cobalt (CAS # 7440-48-4): carcinogen, 7/1/1992 (powder)

Ammonium Dichromate (CAS # 7789-09-5): "carcinogen, 2/27/1987" As Chromium hexavalent compounds [RR-00026-0]

Ammonium Dichromate (CAS # 7789-09-5): "developmental toxicity, 12/19/2008" As Chromium(VI) compounds [RR-00026-0]

Ammonium Dichromate (CAS # 7789-09-5): "female reproductive toxicity 12/19/08" As Chromium hexavalent compounds [RR-00026-0]

Ammonium Dichromate (CAS # 7789-09-5): "male reproductive toxicity, 12/19/08" As Chromium hexavalent compounds [RR-00026-0]

Ammonium Dichromate (CAS # 7789-09-5): carcinogen, 2/27/1987

Ammonium Dichromate (CAS # 7789-09-5): developmental toxicity, 12/19/2008

Ammonium Dichromate (CAS # 7789-09-5): female reproductive toxicity 12/19/08

Ammonium Dichromate (CAS # 7789-09-5): male reproductive toxicity, 12/19/08

Product Number: RINFCK15 Page 25 of 28



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

Calcium Carbonate (CAS # 471-34-1): Present (DSL)

Iron (CAS # 7439-89-6): Present (DSL)

Lead (CAS # 7439-92-1): Present (DSL)

Magnesium (CAS # 7439-95-4): Present (DSL)

Manganese (CAS # 7439-96-5): Present (DSL)

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

Arsenic (CAS # 7440-38-2): Present (DSL)

Cadmium (CAS # 7440-43-9): Present (DSL)

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

Copper (CAS # 7440-50-8): Present (DSL)

Zinc (CAS # 7440-66-6): Present (DSL)

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

Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): Present (DSL)

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

Aluminum Nitrate Nonahydrate (CAS # 7784-27-2): Present (DSL)

Ammonium Dichromate (CAS # 7789-09-5): Present (DSL)

Ammonium Metavanadate (CAS # 7803-55-6): 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)

Iron (CAS # 7439-89-6): Present (ACTIVE)

Lead (CAS # 7439-92-1): Present (ACTIVE)

Magnesium (CAS # 7439-95-4): Present (ACTIVE)

Manganese (CAS # 7439-96-5): Present (ACTIVE)

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

Arsenic (CAS # 7440-38-2): Present (ACTIVE)

Cadmium (CAS # 7440-43-9): Present (ACTIVE)

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

Copper (CAS # 7440-50-8): Present (ACTIVE)

Zinc (CAS # 7440-66-6): Present (ACTIVE)

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

Ammonium Dihydrogen Phosphate (CAS # 7722-76-1): Present (ACTIVE)

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

Aluminum Nitrate Nonahydrate (CAS # 7784-27-2): Present (ACTIVE)

Ammonium Dichromate (CAS # 7789-09-5): Present (ACTIVE)

Ammonium Metavanadate (CAS # 7803-55-6): Present (ACTIVE)

Product Number: RINFCK15 Page 26 of 28

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

Iron (CAS # 7439-89-6): 231-096-4 Lead (CAS # 7439-92-1): 231-100-4

Magnesium (CAS # 7439-95-4): 231-104-6

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

Nickel (CAS # 7440-02-0): 231-111-4

Arsenic (CAS # 7440-38-2): 231-148-6

Cadmium (CAS # 7440-43-9): 231-152-8

Cobalt (CAS # 7440-48-4): 231-158-0

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

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

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

Aluminum Nitrate Nonahydrate (CAS # 7784-27-2): 236-751-8

Ammonium Dichromate (CAS # 7789-09-5): 232-143-1

Ammonium Metavanadate (CAS # 7803-55-6): 232-261-3

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. Fatal if inhaled. May damage fertility or the unborn child. Toxic to aquatic life with long lasting effects.

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. Use only outdoors or in a well-ventilated area. Avoid release to the environment. 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 (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 is urgent (Wash areas of contact with water immediately). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Collect spillage.

Store in a well-ventilated place. Keep container tightly closed. 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.

Product Number: RINFCK15 Page 27 of 28



16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

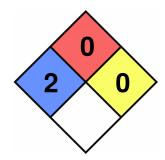
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

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: 2023-09-11

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.

Product Number: RINFCK15 Page 28 of 28