RICCA CHEMICAL COMPANY®

Safety Data Sheet

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: MISA Standard 6, Transition Metals

Product Number: RMISA6
Other Identifying Product Numbers: RMISA6-100

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 hr)

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 (in accordance with OSHA HCS 29 CFR 1910.1200)

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statement	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
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 1	H370	P260, P264, P270, P307+P311, P321, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501
Aspiration Hazard	Category 1	H304	P301+P310, P331, 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.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P234	Keep only in original container.
P260	Do not breathe dust, fumes or mist.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
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 d Continue rinsing.
P307+P311	IF exposed: Call a POISON CENTER or physician.
P310	Immediately call a POISON CENTER or physician.
P314	Get medical attention if you feel unwell.
P320	Specific treatment is urgent (Wash areas of contact with water immediately).
P321	Specific treatment (Wash areas of contact with water immediately).
P331	Do NOT induce vomiting.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
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.

2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

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_2O	18.01 g/mol	7732-18-5	89.33%
Nitric Acid	HNO_3	63.01 g/mol	7697-37-2	10.49%
Chromium Nitrate Nonahydrate	$Cr(NO_3)_3 \cdot 9H_2O$	238.01 g/mol	7789-02-8	0.07%
Zinc	Zn	65.40 g/mol	7440-66-6	0.01%
Vanadium	V	50.94 g/mol	7440-62-2	0.01%
Copper	Cu	63.54 g/mol	7440-50-8	0.01%
Cobalt	Co	58.93 g/mol	7440-48-4	0.01%
Cadmium	Cd	112.41 g/mol	7440-43-9	0.01%
Thallium	Tl	204.38 g/mol	7440-28-0	0.01%
Silver	Ag	107.86 g/mol	7440-22-4	0.01%
Nickel	Ni	58.69 g/mol	7440-02-0	0.01%
Mercury	Hg	200.59 g/mol	7439-97-6	0.01%
Manganese	Mn	54.93 g/mol	7439-96-5	0.01%
Lead	Pb	207.2 g/mol	7439-92-1	0.01%
Iron	Fe	55.84 g/mol	7439-89-6	0.01%

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation, redness and pain. Contact will discolor skin yellow-brown depending on exposure which will wear off after a period of time.

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

4.2. Most Important Symptoms and Effects, Acute and Delayed

Corrosive Liquid. May be fatal if swallowed. Contains minute amounts of known and suspected carcinogens. Avoid contact with skin, eyes, and clothing. Avoid breathing vapor. If swallowed, do not induce vomiting. Dilute with water and call a physician. Wash areas of contact with plenty of water.

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

4.3. Medical Attention or Special Treatment Needed

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

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SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use water or water spray.

5.2. Specific Hazards Arising from the Substance or Mixture

Not combustible, but substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can react with metals to release flammable hydrogen gas.

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

Absorb with suitable material and 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
Cadmium (7440-43-9)	TWA	USA	0.1 mg/m³ TWA (fume, applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect) 0.2 mg/m³ TWA (dust, applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect) 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 0.002 mg/m³ TWA (respirable fraction)	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 fraction, as Cd)	ACGIH - Threshold Limit Values - Time 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)	PEL	USA	5 µg/m³ TWA (Do not eat, drink or chew tobacco or gum or apply cosmetics in regulated areas. Carcinogen - dust can cause lung and kidney disease. See 29 CFR 1910.1027) 2.5 µg/m³ Action Level	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Cadmium (7440-43-9)	PEL	USA	5 µg/m³ TWA (Do not eat, drink or chew tobacco or gum or apply cosmetics in regulated areas. Carcinogen - dust can cause lung and kidney disease. See 29 CFR 1910.1027, as Cd) 2.5 µg/m³ Action Level (as Cd)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Chromium Nitrate Nonahydrate (7789-02-8)	TWA	USA	0.5 mg/m³ TWA (as Cr)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Chromium Nitrate Nonahydrate (7789-02-8)	TLV-TWA	USA	0.5 mg/m³ TWA (as Cr)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (7440-48-4)	TWA	USA	0.1 mg/m³ TWA (dust and fume)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cobalt (7440-48-4)	TLV-TWA	USA	0.02 mg/m³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (7440-48-4)	TLV-TWA	USA	0.02 mg/m³ TWA (as Co)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper (7440-50-8)	TWA	USA	0.1 mg/m³ TWA (fume) 1 mg/m³ TWA (dust and mist)	U.S. - OSHA - Final PELs - Time 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 mist, as Cu)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Lead (7439-92-1)	TWA	USA	50 µg/m³ TWA (as Pb)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Lead (7439-92-1)	TWA	USA	50 µg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
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)	TLV-TWA	USA	0.05 mg/m³ TWA (as Pb)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Lead (7439-92-1)	PEL	USA	30 µg/m³ Action Level (Poison, See 29 CFR 1910.1025, as Pb) 50 µg/m³ TWA (as Pb)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Lead (7439-92-1)	PEL	USA	30 µg/m³ Action Level (Poison, See 29 CFR 1910.1025) 50 µg/m³ TWA	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Manganese (7439-96-5)	TLV-TWA	USA	0.02 mg/m³ TWA (as Mn, listed under respirable fraction) 0.1 mg/m³ TWA (as Mn)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese (7439-96-5)	TLV-TWA	USA	0.02 mg/m³ TWA (respirable fraction) 0.1 mg/m³ TWA (inhalable fraction)	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)	U.S. - OSHA - Final PELs - Ceiling Limits
Mercury (7439-97-6)	TLV-TWA	USA	0.025 mg/m³ TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Mercury (7439-97-6)	TLV-TWA	USA	0.025 mg/m³ TWA (as Hg)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Mercury (7439-97-6)	PEL-Ceiling	USA	0.1 mg/m³ Ceiling	U.S. - OSHA - Final PELs - Ceiling Limits
Nickel (7440-02-0)	TWA	USA	1 mg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Nickel (7440-02-0)	TLV-TWA	USA	1.5 mg/m³ TWA (inhalable fraction)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TWA	USA	2 ppm TWA 5 mg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	4 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	2 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Silver (7440-22-4)	TWA	USA	0.01 mg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Silver (7440-22-4)	TLV-TWA	USA	0.1 mg/m³ TWA (dust and fume)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Thallium (7440-28-0)	TLV-TWA	USA	0.02 mg/m³ TWA (inhalable fraction)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Thallium (7440-28-0)	TLV-TWA	USA	0.02 mg/m³ TWA (inhalable fraction, as Tl)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Vanadium (7440-62-2)	PEL-Ceiling	USA	0.5 mg/m³ Ceiling (respirable dust, as V2O5) 0.1 mg/m³ Ceiling (fume, as V2O5)	U.S. - OSHA - Final PELs - Ceiling Limits

8.2. Exposure Controls

Engineering Controls: Use only outdoors or in a well-ventilated area. No specific controls are needed. Normal room ventilation is adequa

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:	Light colored liquid
Physical State:	Liquid
Odor:	Data not available.
Odor Threshold:	Data not available.
pH:	Acidic
Melting/Freezing Point:	Data not available.
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:	1.06
Solubility:	Miscible
Partition Coeffieient (n-Octanol/Water):	Data not available.
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
Viscosity:	Data not available.
ExplosiveProperties:	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:

Fatal if inhaled. Do not breathe dust, fumes or mist. 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.

Skin Corrosion and Irritation:

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

Serious Eye Damage and Irritation:

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

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration Hazard:

May be fatal if swallowed and enters airways. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

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)

UN Number: UN3264

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

Hazard Class: 8

Packing Group: III

Hazard Placard Labels:

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

UN Number: UN3264

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

Hazard Class: 8

Packing Group: III

Hazard Placard Labels:

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)
Lead (CAS # 7439-92-1): 30 µg/m3 Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m3 TWA (See 29 CFR 1910.1025, as Pb)
Cadmium (CAS # 7440-43-9): 5 µg/m3 TWA (See 29 CFR 1910.1027); 2.5 µg/m3 Action Level
Cadmium (CAS # 7440-43-9): 5 µg/m3 TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m3 Action Level (as Cd)

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

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

Iron (CAS # 7439-89-6): 0.1 curie final RQ; 0.0037 TBq final RQ
Iron (CAS # 7439-89-6): 10 curie final RQ; 0.37 TBq final RQ
Iron (CAS # 7439-89-6): 100 curie final RQ; 3.7 TBq final RQ
Lead (CAS # 7439-92-1): 0.01 curie final RQ; 0.00037 TBq final RQ
Lead (CAS # 7439-92-1): 1 curie final RQ; 0.037 TBq final RQ
Lead (CAS # 7439-92-1): 10 curie final RQ; 0.37 TBq final RQ
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 µm); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
Lead (CAS # 7439-92-1): 100 curie final RQ; 3.7 TBq final RQ
Lead (CAS # 7439-92-1): 1000 curie final RQ; 37 TBq final RQ
Manganese (CAS # 7439-96-5): 10 curie final RQ; 0.37 TBq final RQ
Manganese (CAS # 7439-96-5): 100 curie final RQ; 3.7 TBq final RQ
Manganese (CAS # 7439-96-5): 1000 curie final RQ; 37 TBq final RQ
Mercury (CAS # 7439-97-6): 0.1 curie final RQ; 0.0037 TBq final RQ
Mercury (CAS # 7439-97-6): 1 lb final RQ; 0.454 kg final RQ
Mercury (CAS # 7439-97-6): 10 curie final RQ; 0.37 TBq final RQ
Mercury (CAS # 7439-97-6): 100 curie final RQ; 3.7 TBq final RQ
Mercury (CAS # 7439-97-6): 1000 curie final RQ; 37 TBq final RQ
Nickel (CAS # 7440-02-0): 10 curie final RQ; 0.37 TBq final RQ
Nickel (CAS # 7440-02-0): 100 curie final RQ; 3.7 TBq final RQ
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 µm); 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 µm)
Silver (CAS # 7440-22-4): 1 lb final RQ; 0.454 kg final RQ
Silver (CAS # 7440-22-4): 10 curie final RQ; 0.37 TBq final RQ
Silver (CAS # 7440-22-4): 100 curie final RQ; 3.7 TBq final RQ
Silver (CAS

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

Lead (CAS # 7439-92-1): 0.1 % Supplier notification limit (listed under Chemical Category N420)
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
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
Manganese (CAS # 7439-96-5): 1.0 % de minimis concentration (listed under Chemical Category N450)
Mercury (CAS # 7439-97-6): 1.0 % Supplier notification limit
Mercury (CAS # 7439-97-6): 1.0 % Supplier notification limit (listed under Chemical Category N458)
Mercury (CAS # 7439-97-6): 10 lb RT
Nickel (CAS # 7440-02-0): 0.1 % de minimis concentration
Nickel (CAS # 7440-02-0): 0.1 % de minimis concentration (listed under Chemical Category N495)
Silver (CAS # 7440-22-4): 1.0 % de minimis concentration
Silver (CAS # 7440-22-4): 1.0 % de minimis concentration (listed under Chemical Category N740)
Thallium (CAS # 7440-28-0): 1.0 % de minimis concentration
Thallium (CAS # 7440-28-0): 1.0 % de minimis concentration (listed under Chemical Category N760)
Cadmium (CAS # 7440-43-9): 0.1 % de minimis concentration
Cadmium (CAS # 7440-43-9): 0.1 % de minimis concentration (listed under Chemical Category N084)
Cobalt (CAS # 7440-48-4): 0.1 % de minimis concentration
Cobalt (CAS # 7440-48-4): 0.1 % de minimis concentration (listed under Chemical Category N096)
Copper (CAS # 7440-50-8): 1.0 % de minimis concentration
Copper (CAS # 7440-50-8): 1.0 % de minimis concentration (This category does not include CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only hydrogen and/or chlorine and/or bromine.)
Vanadium (CAS # 7440-62-2): 1.0 % de minimis concentration (except when contained in an alloy)
Vanadium (CAS # 7440-62-2): 1.0 % de minimis concentration (listed

15.5. Massachusetts Right-to-Know Substance List

Lead (CAS # 7439-92-1): Teratogen
Manganese (CAS # 7439-96-5): Present
Mercury (CAS # 7439-97-6): Present
Nickel (CAS # 7440-02-0): Carcinogen; Extraordinarily hazardous
Silver (CAS # 7440-22-4): Present
Thallium (CAS # 7440-28-0): Present
Cadmium (CAS # 7440-43-9): Carcinogen; Extraordinarily hazardous
Cobalt (CAS # 7440-48-4): Present
Copper (CAS # 7440-50-8): Present
Vanadium (CAS # 7440-62-2): Present (dust and fume)
Zinc (CAS # 7440-66-6): Present
Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous

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15.6. Pennsylvania Right-to-Know Hazardous Substances

Lead (CAS # 7439-92-1): Environmental hazard
Lead (CAS # 7439-92-1): Present
Manganese (CAS # 7439-96-5): Environmental hazard
Manganese (CAS # 7439-96-5): Present
Mercury (CAS # 7439-97-6): Environmental hazard
Mercury (CAS # 7439-97-6): Present
Nickel (CAS # 7440-02-0): Environmental hazard
Nickel (CAS # 7440-02-0): Environmental hazard; Special hazardous substance
Nickel (CAS # 7440-02-0): Present
Silver (CAS # 7440-22-4): Environmental hazard
Silver (CAS # 7440-22-4): Present
Thallium (CAS # 7440-28-0): Environmental hazard
Thallium (CAS # 7440-28-0): Present
Cadmium (CAS # 7440-43-9): Environmental hazard
Cadmium (CAS # 7440-43-9): Environmental hazard (dust, fume, powder); Special hazardous substance (powder)
Cadmium (CAS # 7440-43-9): Present
Cadmium (CAS # 7440-43-9): Present (dust, fume, powder)
Cadmium (CAS # 7440-43-9): Present (powder)
Cobalt (CAS # 7440-48-4): Environmental hazard
Cobalt (CAS # 7440-48-4): Environmental hazard (fume)
Cobalt (CAS # 7440-48-4): Present
Copper (CAS # 7440-50-8): Environmental hazard
Copper (CAS # 7440-50-8): Environmental hazard (dust and fume)
Copper (CAS # 7440-50-8): Present
Copper (CAS # 7440-50-8): Present (dust and fume)
Vanadium (CAS # 7440-62-2): Environmental hazard (dust and fume)
Vanadium (CAS # 7440-62-2): Present (dust or fume)
Zinc (CAS # 7440-66-6): Environmental hazard
Zinc (CAS # 7440-66-6): Present
Nitric Acid (CAS # 7697-37-2): Environmental hazard
Nitric Acid (CAS # 7697-37-2): Present
Water (CAS # 7732-18-5): Present
Chromium Nitrate Nonahydrate (CAS # 7789-02-8): Environmental hazard
Chromium Nitrate Nonahydrate (CAS # 7789-02-8): Present

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

Lead (CAS # 7439-92-1): carcinogen
Lead (CAS # 7439-92-1): carcinogen; teratogen
Lead (CAS # 7439-92-1): sn 1096
Lead (CAS # 7439-92-1): SN 1096 TPQ: 500 lb
Lead (CAS # 7439-92-1): sn 2266
Lead (CAS # 7439-92-1): SN 2266 TPQ: 500 lb (Category Code N420. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
Manganese (CAS # 7439-96-5): flammable - third degree
Manganese (CAS # 7439-96-5): sn 1155 (dust and fume)
Manganese (CAS # 7439-96-5): SN 1155 TPQ: 500 lb
Manganese (CAS # 7439-96-5): sn 2324
Manganese (CAS # 7439-96-5): SN 2324 TPQ: 500 lb (Category Code N450. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
Mercury (CAS # 7439-97-6): corrosive
Mercury (CAS # 7439-97-6): sn 1183
Mercury (CAS # 7439-97-6): SN 1183 TPQ: 500 lb
Mercury (CAS # 7439-97-6): SN 2414 TPQ: 500 lb (Category Code N458. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
Nickel (CAS # 7440-02-0): carcinogen
Nickel (CAS # 7440-02-0): sn 1341 (dust and fume)
Nickel (CAS # 7440-02-0): SN 1341 TPQ: 500 lb
Nickel (CAS # 7440-02-0): sn 2366
Nickel (CAS # 7440-02-0): SN 2366 TPQ: 500 lb (Category Code N495. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
Silver (CAS # 7440-22-4): flammable - third degree
Silver (CAS # 7440-22-4): sn 1669
Silver (CAS # 7440-22-4): SN 1669 TPQ: 500 lb
Silver (CAS # 7440-22-4): sn 3008
Silver (CAS # 7440-22-4): SN 3008 TPQ: 500 lb (Category Code N740. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
Thallium (CAS # 7440-28-0): flammable - third degree
Thallium (CAS # 7440-28-0): sn 1840
Thallium (CAS # 7440-28-0): SN 1840 TPQ: 500 lb
Thallium (CAS # 7440-28-0): sn 2809
Thallium (CAS # 7440-28-0): SN 2809 TPQ: 500 lb (Category Code N760. Includes any unique chemical substance that contains the

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15.8. California Proposition 65

Lead (CAS # 7439-92-1): 15 µg/day NSRL (oral)
Lead (CAS # 7439-92-1): carcinogen, initial date 10/1/92
Lead (CAS # 7439-92-1): developmental toxicity, initial date 2/27/87
Lead (CAS # 7439-92-1): female reproductive toxicity, initial date 2/27/87
Lead (CAS # 7439-92-1): male reproductive toxicity, initial date 2/27/87
Mercury (CAS # 7439-97-6): developmental toxicity, initial date 7/1/90
Nickel (CAS # 7440-02-0): carcinogen, initial date 10/1/89 (metallic)
Nickel (CAS # 7440-02-0): carcinogen, initial date 5/7/04
Cadmium (CAS # 7440-43-9): 0.05 µg/day NSRL (inhalation)
Cadmium (CAS # 7440-43-9): carcinogen, initial date 10/1/87
Cadmium (CAS # 7440-43-9): developmental toxicity, initial date 5/1/97
Cadmium (CAS # 7440-43-9): male reproductive toxicity, initial date 5/1/97
Cobalt (CAS # 7440-48-4): carcinogen, initial date 7/1/92 (powder)

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

Iron (CAS # 7439-89-6): Present
Lead (CAS # 7439-92-1): Present
Manganese (CAS # 7439-96-5): Present
Mercury (CAS # 7439-97-6): Present
Nickel (CAS # 7440-02-0): Present
Silver (CAS # 7440-22-4): Present
Thallium (CAS # 7440-28-0): Present
Cadmium (CAS # 7440-43-9): Present
Cobalt (CAS # 7440-48-4): Present
Copper (CAS # 7440-50-8): Present
Vanadium (CAS # 7440-62-2): Present
Zinc (CAS # 7440-66-6): Present
Nitric Acid (CAS # 7697-37-2): Present
Water (CAS # 7732-18-5): Present
Chromium Nitrate Nonahydrate (CAS # 7789-02-8): Present

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

Iron (CAS # 7439-89-6): Present
Lead (CAS # 7439-92-1): Present
Manganese (CAS # 7439-96-5): Present
Mercury (CAS # 7439-97-6): Present [S]
Nickel (CAS # 7440-02-0): Present
Silver (CAS # 7440-22-4): Present
Thallium (CAS # 7440-28-0): Present
Cadmium (CAS # 7440-43-9): Present
Cobalt (CAS # 7440-48-4): Present
Copper (CAS # 7440-50-8): Present
Vanadium (CAS # 7440-62-2): Present
Zinc (CAS # 7440-66-6): Present
Nitric Acid (CAS # 7697-37-2): Present
Water (CAS # 7732-18-5): Present
Chromium Nitrate Nonahydrate (CAS # 7789-02-8): Present

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

May be corrosive to metals. May be fatal if swallowed and enters airways. Causes severe skin burns and eye damage. Causes serious eye damage. Fatal if inhaled. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Keep only in original container. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. 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: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment is urgent (Wash areas of contact with water immediately). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

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.

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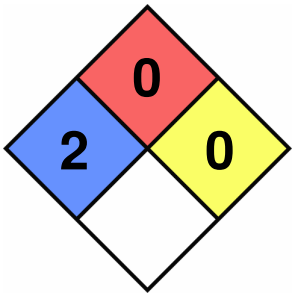
16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.
Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.
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: 5/1/2015

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.