

# Precious Alloys & Solders

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations  
Revision Date: 05/04/2016

Rev 4

### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Form:** Article

**Products:** Applies to Precious Alloys, Solders, and Metals.

**Intended Use of the Product:** For professional dental use only.

#### Name, Address, and Telephone of the Responsible Party

Jensen Industries Inc.  
50 Stillman Road  
North Haven, CT 06473  
T 1-800-243-2000

#### Emergency Telephone Number

**Emergency Number (USA & Canada Only):** CHEMTREC 1-800-424-9300

**Emergency Number (All other Countries):** 203-239-2090

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### Classification (GHS-US)

Resp. Sens. 1 H334  
Skin Sens. 1 H317  
Carc. 2 H351  
Repr. 2 H361  
Aquatic Acute 1 H400  
Aquatic Chronic 1 H410

#### Label Elements

##### GHS-US Labeling

##### Hazard Pictograms (GHS-US)



##### Signal Word (GHS-US)

##### Hazard Statements (GHS-US)

##### Precautionary Statements (GHS-US)

- : Danger
- : H317 - May cause an allergic skin reaction.  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H351 - Suspected of causing cancer.  
H361 - Suspected of damaging fertility or the unborn child.  
H400 - Very toxic to aquatic life.  
H410 - Very toxic to aquatic life with long lasting effects.
- : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing dust, fume.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P273 - Avoid release to the environment.  
P280 - Wear protective clothing, protective gloves, eye protection.  
P284 - [In case of inadequate ventilation] wear respiratory protection.  
P302+P352 - If on skin: Wash with plenty of water.  
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P342+P311 - If experiencing respiratory symptoms: Call POISON CENTER/doctor.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P391 - Collect spillage.



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P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

### Other Hazards

**Cobalt:** Inhalation of cobalt dust/fumes may lead to respiratory conditions. Symptoms and conditions include: Cough, dyspnea (breathing difficulty), wheezing, decreased pulmonary function; weight loss; diffuse nodular fibrosis; respiratory hypersensitivity, asthma. Dermal contact can potentially cause dermatitis.

**Copper:** Inhalation of copper oxide fume can result in metal fume fever. This is a self-limiting condition characterized by flu-like symptoms which resolve within 24 to 48 hours.

**Indium:** Inhalation of indium dust/fumes may cause lung damage; pulmonary edema. Other target organs include: liver, kidneys, heart, and blood.

**Iron:** Inhalation of Iron dust/fumes may cause a chronic condition known as pneumoconiosis. Early symptoms of pneumoconiosis include chest tightness and shortness of breath. Advanced symptoms include serious breathing impairment, chronic bronchitis, and emphysema.

**Manganese:** Inhalation of manganese dust/fumes can result in a condition known as Manganism. Manganism is a disease caused by exposure to excessive levels of manganese, which attacks the normal functions of the central nervous system, kidneys, and liver. Manganism is characterized by diminished motor skills and psychological disturbances, symptoms that parallel those of Parkinson's disease. Target organs include: Respiratory system, central nervous system, and kidneys.

**Platinum:** Inhalation of platinum dust/fumes can cause irritation to the upper respiratory region; asthma.

**Rhodium:** Inhalation of rhodium dust/fumes can cause irritation to the upper respiratory region.

**Silver:** Absorption of silver compounds by ingestion, inhalation or through broken skin can cause argyria, a permanent bluish-grey discoloration of the skin, conjunctiva and mucous membranes.

**Tin:** Inhalation of tin oxides can lead to a condition called stannosis (benign pneumoconiosis). Early symptoms of pneumoconiosis include chest tightness and shortness of breath. Advanced symptoms include serious breathing impairment, chronic bronchitis, and emphysema.

**Zinc:** Inhalation of zinc oxide fume can result in metal fume fever. This is a self-limiting condition characterized by flu-like symptoms which resolve within 24 to 48 hours.

**Unknown Acute Toxicity (GHS-US)** Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Gold	(CAS No) 7440-57-5	<= 100	Not classified
Palladium	(CAS No) 7440-05-3	<= 79.7	Comb. Dust Flam. Sol. 2, H228 Aquatic Chronic 4, H413
Silver	(CAS No) 7440-22-4	<= 100	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Indium	(CAS No) 7440-74-6	<= 30	Not classified
Copper	(CAS No) 7440-50-8	<= 22	Not classified
Platinum	(CAS No) 7440-06-4	<= 12.4	Flam. Sol. 1, H228
Tin	(CAS No) 7440-31-5	<= 9.5	Comb. Dust
Gallium	(CAS No) 7440-55-3	<= 7	Skin Corr. 1B, H314 Eye Dam. 1, H318
Zinc	(CAS No) 7440-66-6	<= 5	Comb. Dust Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Cobalt	(CAS No) 7440-48-4	<= 2	Acute Tox. 4 (Oral), H302 Acute Tox. 1 (Inhalation:dust,mist), H330 Resp. Sens. 1B, H334 Skin Sens. 1, H317 Carc. 2, H351 Repr. 2, H361 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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Iron	(CAS No) 7439-89-6	< 1	Comb. Dust Flam. Sol. 1, H228 Self-heat. 1, H251
Iridium	(CAS No) 7439-88-5	< 1	Comb. Dust Flam. Sol. 1, H228 Eye Irrit. 2A, H319 Aquatic Chronic 4, H413
Manganese	(CAS No) 7439-96-5	< 1	Comb. Dust
Rhodium	(CAS No) 7440-16-6	< 1	Aquatic Chronic 4, H413
Ruthenium	(CAS No) 7440-18-8	< 1	Flam. Sol. 1, H228
Rhenium	(CAS No) 7440-15-5	< 1	Flam. Sol. 1, H228

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Seek medical attention for thermal burns.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting.

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Risk of thermal burns on contact with molten product. Exposure may produce an allergic reaction. There are potential chronic health effects to consider.

**Inhalation:** Inhalation of dusts and fumes can cause metal fume fever. Symptoms can include a metallic or sweet taste in the mouth, sweating, shivering, headache, throat irritation, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, fatigue, and shortness of breath. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin Contact:** Contact with hot, molten metal will cause thermal burns. May cause an allergic skin reaction.

**Eye Contact:** Risk of thermal burns on contact with molten product. Dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes.

**Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** May cause cancer. May damage fertility or the unborn child.

### Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Product is not flammable. Small chips, turnings, dust and fines from processing may be readily ignitable.

**Explosion Hazard:** Fine dust clouds may form explosive mixtures with air.

**Reactivity:** Dust and other forms of product formed from processing might react with water producing a flammable/explosive environment, especially in confined spaces. Molten material will react violently with water.

### Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Burning material releases heavy metal oxide fumes.

### Reference to Other Sections

Refer to section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not breathe dust or fumes. Where possible allow molten material to solidify naturally.

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### For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

### For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

**Environmental Precautions** Prevent entry to sewers and public waters.

### Methods and Material for Containment and Cleaning Up

**For Containment:** Contain and collect as any solid.

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely. Avoid actions that cause dust to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8.

### Reference to Other Sections

See Section 13, Disposal Considerations. See Section 8, Exposure Controls and Personal Protection.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

**Additional Hazards When Processed:** Inhalation of fumes may cause metal fume fever. Risk of thermal burns on contact with molten product.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

### Conditions for Safe Storage, Including Any Incompatibilities

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

**Specific End Use(s)** For professional dental use only.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government

<b>Silver (7440-22-4)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup> (dust)
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (dust)
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL STEL (mg/m <sup>3</sup> )	0.03 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL (mg/m <sup>3</sup> )	0.03 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>

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<b>Cobalt (7440-48-4)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (dust and fume)
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (dust and fume)
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup> (dust and fume)
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (metal-dust and fume)
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup> (dust and fume)
<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL (mg/m <sup>3</sup> )	0.06 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup> (dust and fume)
<b>Yukon</b>	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (dust and fume)
<b>Copper (7440-50-8)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Mexico</b>	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> (fume) 2 mg/m <sup>3</sup> (dust and mist)
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (dust and mist) 0.1 mg/m <sup>3</sup> (fume)
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (dust, fume and mist)
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (dust and mist)
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (fume)
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (fume)
<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Saskatchewan</b>	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup> (fume)
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Yukon</b>	OEL STEL (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
<b>Yukon</b>	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)

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<b>Indium (7440-74-6)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Mexico	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>Manganese (7439-96-5)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> (fume)
Mexico	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (fume)
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (respirable fraction) 0.1 mg/m <sup>3</sup> (inhalable fraction)
USA OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (fume)
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (fume)
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (respirable fraction)
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (respirable fraction)
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (respirable fraction)
Nunavut	OEL Ceiling (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (fume)
Nunavut	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (fume)
Northwest Territories	OEL Ceiling (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup> (fume)
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (fume)
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.02 mg/m <sup>3</sup> (respirable fraction)
Québec	VEMP (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (total dust and fume)
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Yukon	OEL Ceiling (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
<b>Platinum (7440-06-4)</b>		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>

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<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.002 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Tin (7440-31-5)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Mexico</b>	OEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup>
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Prince Edward Island</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL (mg/m <sup>3</sup> )	4 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
<b>Rhodium (7440-16-6)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (dust and fume)
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (fume)
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (fume)
<b>USA IDLH</b>	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (fume)
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Nova Scotia</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup> (dust and fume)
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (metal-dust and fume)
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup> (dust and fume)
<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)
<b>Ontario</b>	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>

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Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	0.3 mg/m <sup>3</sup> (dust and fume)
Yukon	OEL TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (dust and fume)

### Exposure Controls

**Appropriate Engineering Controls:** When melting or grinding: Local exhaust and general ventilation must be adequate to meet exposure standards. Site-specific risk assessments should be conducted to determine the appropriate exposure control measures. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

**Personal Protective Equipment:** When melting or grinding: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:** When melting or grinding: With molten material wear thermally protective clothing.

**Hand Protection:** When melting or grinding: Wear protective gloves.

**Eye Protection:** When melting or grinding: Chemical safety goggles.

**Skin and Body Protection:** Wash contaminated clothing before reuse.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

**Thermal Hazard Protection:** Protect skin and eyes from contact with molten material.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Yellow or white metal
Odor	: None
Odor Threshold	: Not available
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: 774 - 1769 °C (1425 - 3216°F)
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Specific gravity / density	: 10 – 21.5 g/cm <sup>3</sup>
Solubility	: Insoluble in water
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.



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### SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Dust and other forms of product formed from processing might react with water producing a flammable/explosive environment, especially in confined spaces. Molten material will react violently with water.

**Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Avoid creating or spreading dust.

**Incompatible Materials:** None known.

**Hazardous Decomposition Products:** None known.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not classified

**Carcinogenicity:** Suspected of causing cancer.

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Suspected of damaging fertility or the unborn child.

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Inhalation of dusts and fumes can cause metal fume fever. Symptoms can include a metallic or sweet taste in the mouth, sweating, shivering, headache, throat irritation, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, fatigue, and shortness of breath. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Symptoms/Injuries After Skin Contact:** Contact with hot, molten metal will cause thermal burns. May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** Risk of thermal burns on contact with molten product. Dusts caused from milling and physical alteration will likely cause eye irritation. Fumes from thermal decomposition or molten material will likely be irritating to the eyes.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** May cause cancer. May damage fertility or the unborn child.

#### Information on Toxicological Effects - Ingredient(s)

**LD50 and LC50 Data:**

<b>Silver (7440-22-4)</b>	
LD50 Oral Rat	> 2000 mg/kg
<b>Cobalt (7440-48-4)</b>	
LD50 Oral Rat	215.9 - 1140 mg/kg
LC50 Inhalation Rat	> 10 mg/l (Exposure time: 1 h)
<b>Iron (7439-89-6)</b>	
LD50 Oral Rat	98.6 g/kg
<b>Indium (7440-74-6)</b>	
LD50 Oral Rat	4200 mg/kg
<b>Manganese (7439-96-5)</b>	
LD50 Oral Rat	> 2000 mg/kg
<b>Cobalt (7440-48-4)</b>	
IARC Group	2B

### SECTION 12: ECOLOGICAL INFORMATION

#### Toxicity

**Ecology - General:** Very toxic to aquatic life with long lasting effects.

<b>Silver (7440-22-4)</b>	
LC50 Fish 1	0.00155 - 0.00293 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	0.00024 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

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LC 50 Fish 2	0.0062 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
NOEC chronic fish	390 ng/l (Exposure time: 28d - Species: Pimephales promelas)

### Copper (7440-50-8)

LC50 Fish 1	0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 1	0.0426 - 0.0535 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])
LC 50 Fish 2	0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2	0.031 - 0.054 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])

### Manganese (7439-96-5)

NOEC chronic fish	3.6 mg/l (Exposure time: 96h; Species: Oncorhynchus mykiss)
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### Zinc (7440-66-6)

LC50 Fish 1	2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static])

### Persistence and Degradability

#### Copper (7440-50-8)

Persistence and Degradability	Not readily biodegradable.
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### Bioaccumulative Potential

#### Cobalt (7440-48-4)

BCF Fish 1	(no bioaccumulation)
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**Mobility in Soil** Not available

### Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Ecology – Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

**In Accordance with DOT** Not regulated for transport

**In Accordance with IMDG** Not regulated for transport

**In Accordance with IATA** Not regulated for transport

**In Accordance with TDG** Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### US Federal Regulations

#### Silver (7440-22-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

<b>RQ (Reportable Quantity, Section 304 of EPA's List of Lists):</b>	1000 lb < 100 um	CERCLA/SARA RQ CHANGE TITLE
<b>SARA Section 313 - Emission Reporting</b>	1.0 %	

#### Gold (7440-57-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Cobalt (7440-48-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

<b>SARA Section 313 - Emission Reporting</b>	0.1 %
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#### Copper (7440-50-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on United States SARA Section 313

<b>SARA Section 313 - Emission Reporting</b>	1.0 %
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#### Iron (7439-89-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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<b>Gallium (7440-55-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Indium (7440-74-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Iridium (7439-88-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Manganese (7439-96-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
<b>SARA Section 313 - Emission Reporting</b>	1.0 %
<b>Palladium (7440-05-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Platinum (7440-06-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Rhenium (7440-15-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Ruthenium (7440-18-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Tin (7440-31-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Zinc (7440-66-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on United States SARA Section 313	
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (dust or fume only)
<b>Rhodium (7440-16-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>US State Regulations</b>	
<b>Cobalt (7440-48-4)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Silver (7440-22-4)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Cobalt (7440-48-4)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Copper (7440-50-8)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Gallium (7440-55-3)</b>	
U.S. - New Jersey - Right to Know Hazardous Substance List	
<b>Indium (7440-74-6)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	

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<b>Manganese (7439-96-5)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Platinum (7440-06-4)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Tin (7440-31-5)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Zinc (7440-66-6)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Rhodium (7440-16-6)</b>	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Canadian Regulations</b>	
<b>Precious Alloys &amp; Solders</b>	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria. This product is considered a medical device and is subject to the regulations of the Food and Drugs Act
<b>Silver (7440-22-4)</b>	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List) IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Gold (7440-57-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Cobalt (7440-48-4)</b>	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List) IDL Concentration 0.1 %	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
<b>Copper (7440-50-8)</b>	
Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian IDL (Ingredient Disclosure List) IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Iron (7439-89-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 4 - Flammable Solid Class B Division 6 - Reactive Flammable Material
<b>Gallium (7440-55-3)</b>	
Listed on the Canadian DSL (Domestic Substances List)	

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Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class E - Corrosive Material
<b>Indium (7440-74-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Iridium (7439-88-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 4 - Flammable Solid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
<b>Manganese (7439-96-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Palladium (7440-05-3)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 4 - Flammable Solid
<b>Platinum (7440-06-4)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class B Division 4 - Flammable Solid
<b>Rhenium (7440-15-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 4 - Flammable Solid
<b>Ruthenium (7440-18-8)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class B Division 4 - Flammable Solid
<b>Tin (7440-31-5)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Zinc (7440-66-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
<b>Rhodium (7440-16-6)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision Date** : 05/04/2016  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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### GHS Full Text Phrases:

Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Carc. 2	Carcinogenicity Category 2
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Sol. 1	Flammable solids Category 1
Flam. Sol. 2	Flammable solids Category 2
Repr. 2	Reproductive toxicity Category 2
Resp. Sens. 1B	Respiratory sensitisation Category 1B
Self-heat. 1	Self-heating substances and mixtures Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Sens. 1	Skin sensitization Category 1
H228	Flammable solid
Comb. Dust	May form combustible dust concentrations in air
H251	Self-heating: may catch fire
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

### Party Responsible for the Preparation of This Document

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1-800-243-2000

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

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