1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

**Product Name**
Titanium Alloy With Cobalt Non-Respirable Powder

**Other means of identification**

**Product Code**
PM005

**Synonyms**
Titanium Alloy With Cobalt Non-Respirable Powder: TNM Co Powder

**Recommended use of the chemical and restrictions on use**

**Recommended Use**
Titanium alloy product manufacture.

**Uses advised against**

**Details of the supplier of the safety data sheet**

**Emergency telephone number**

Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory sensitization</td>
<td>1B</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>1</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>1B</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>3</td>
</tr>
</tbody>
</table>

**Label elements**

**Emergency Overview**

**Hazard statements**
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause cancer
Harmful to aquatic life with long lasting effects

**Appearance** Powder

**Physical state** Solid

**Odor** Odorless
Precautionary Statements - Prevention
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wear protective gloves
Avoid breathing dust/fume
In case of inadequate ventilation wear respiratory protection
Avoid release to the environment

Precautionary Statements - Response
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazard not otherwise classified (HNOC)
Not applicable

Other Information
When product is subjected to welding, burning, melting, sawing, brazing, grinding, buffing, polishing, or other similar heat-generating processes, the following potentially hazardous airborne particles and/or fumes may be generated: Titanium dioxide an IARC Group 2B carcinogen, Hexavalent Chromium (Chromium VI) may cause lung, nasal, and/or sinus cancer, Soluble molybdenum compounds such as molybdenum trioxide may cause lung irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium</td>
<td>7440-32-6</td>
<td>50 - 100</td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429-90-5</td>
<td>0 - 40</td>
</tr>
<tr>
<td>Niobium (Columbium)</td>
<td>7440-03-1</td>
<td>0 - 27</td>
</tr>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>0 - 10</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>7439-98-7</td>
<td>0 - 10</td>
</tr>
<tr>
<td>Tungsten</td>
<td>7440-33-7</td>
<td>0 - 10</td>
</tr>
<tr>
<td>Zirconium</td>
<td>7440-67-7</td>
<td>0 - 5</td>
</tr>
<tr>
<td>Cobalt</td>
<td>7440-48-4</td>
<td>0.1 - 2</td>
</tr>
<tr>
<td>Boron</td>
<td>7440-42-8</td>
<td>0 - 1</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures
Eye contact
In the case of particles coming in contact with eyes during processing, treat as with any foreign object.

Skin Contact
In the case of skin allergic reactions see a physician. Wash off immediately with soap and plenty of water.

Inhalation
If excessive amounts of smoke, fume, or particulate are inhaled during processing, remove to fresh air and consult a qualified health professional. In the case of asthma symptoms or breathing difficulties call a physician.

Ingestion
IF SWALLOWED. Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed
Symptoms
May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing
difficulties if inhaled.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**
Product not flammable in the form as distributed, flammable as finely divided particles or pieces resulting from processing of this product. Isolate large fires and allow to burn out. Smother small fires with salt (NaCl) or class D dry powder fire extinguisher.

**Unsuitable extinguishing media**
Do not spray water on burning metal as an explosion may occur. This explosive characteristic is caused by the hydrogen and steam generated by the reaction of water with the burning material.

**Specific hazards arising from the chemical**
Intense heat. Very fine, high surface area material resulting from grinding, buffing, polishing, or similar processes of this product may ignite spontaneously at room temperature. WARNING: Fine particles resulting from grinding, buffing, polishing, or similar processes of this product may form combustible dust-air mixtures. Keep particles away from all ignition sources including heat, sparks, and flame. Prevent dust accumulations to minimize combustible dust hazard.

**Hazardous combustion products**
Titanium dioxide an IARC Group 2B carcinogen, Hexavalent Chromium (Chromium VI) may cause lung, nasal, and/or sinus cancer, Soluble molybdenum compounds such as molybdenum trioxide may cause lung irritation.

**Explosion data**
- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.

**Protective equipment and precautions for firefighters**
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
Use personal protective equipment as required.

**For emergency responders**

**Environmental precautions**

**Environmental precautions**
Collect spillage to prevent release to the environment.

**Methods and material for containment and cleaning up**

**Methods for containment**
Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**
Sweep or shovel material into dry containers. Avoid creating uncontrolled dust.

### 7. HANDLING AND STORAGE

**Precautions for safe handling**
Very fine, high surface area material resulting from grinding, buffing, polishing, or similar processes of this product may ignite spontaneously at room temperature. WARNING: Fine particles resulting from grinding, buffing, polishing, or similar processes of this product may form combustible dust-air mixtures. Keep particles away from all ignition sources including heat, sparks, and flame. Prevent dust accumulations to minimize combustible dust hazard.
 Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatible materials
Dissolves in hydrofluoric acid. Ignites in the presence of fluorine. When heated above 200°C, reacts exothermically with the following: Chlorine, bromine, halocarbons, carbon tetrachloride, carbon tetrafluoride, and freon.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium</td>
<td>TWA: 1 mg/m³ respirable fraction</td>
<td>TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction</td>
</tr>
<tr>
<td>Aluminum 7429-90-5</td>
<td></td>
<td>TWA: 0.02 mg/m³ TWA: 0.02 mg/m³ Co</td>
</tr>
<tr>
<td>Niobium (Columbium) 7440-03-1</td>
<td></td>
<td>TWA: 0.1 mg/m³ dust and fume</td>
</tr>
<tr>
<td>Tungsten 7440-33-7</td>
<td>STEL: 10 mg/m³ STEL: 10 mg/m³ W TWA: 5 mg/m³ TWA: 5 mg/m³ W</td>
<td>(vacated) STEL: 10 mg/m³ (vacated) STEL: 10 mg/m³ W</td>
</tr>
<tr>
<td>Molybdenum 7439-96-7</td>
<td>TWA: 10 mg/m³ inhalable fraction TWA: 3 mg/m³ respirable fraction</td>
<td>W</td>
</tr>
<tr>
<td>Chromium 7440-47-3</td>
<td>TWA: 0.5 mg/m³</td>
<td>TWA: 1 mg/m³</td>
</tr>
<tr>
<td>Zirconium 7440-67-7</td>
<td>STEL: 10 mg/m³ STEL: 10 mg/m³ Zr TWA: 5 mg/m³ TWA: 5 mg/m³ Zr</td>
<td>TWA: 5 mg/m³ Zr (vacated) STEL: 10 mg/m³ (vacated) STEL: 10 mg/m³ Zr</td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>TWA: 0.02 mg/m³</td>
<td>TWA: 0.1 mg/m³</td>
</tr>
<tr>
<td>Boron 7440-42-8</td>
<td></td>
<td>TWA: 0.1 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Avoid generation of uncontrolled particles.

Individual protection measures, such as personal protective equipment

Eye/face protection
When airborne particles may be present, appropriate eye protection is recommended. For example, tight-fitting goggles, foam-lined safety glasses or other protective equipment that shield the eyes from particles.

Skin and body protection
Wear protective gloves. Fire/flame resistant/retardant clothing may be appropriate during hot work with the product.

Respiratory protection
When particulates/fumes/gases are generated and if exposure limits are exceeded or irritation is experienced, proper approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Color</td>
<td>Metallic gray or silver</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

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North America; English
10. STABILITY AND REACTIVITY

Reactivity
Not applicable

Chemical stability
Stable under normal conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Dust formation and dust accumulation.

Incompatible materials
Dissolves in hydrofluoric acid. Ignites in the presence of fluorine. When heated above 200°C, reacts exothermically with the following: Chlorine, bromine, halocarbons, carbon tetrachloride, carbon tetrafluoride, and freon.

Hazardous Decomposition Products
When product is subjected to welding, burning, melting, sawing, brazing, grinding, buffing, polishing, or other similar heat-generating processes, the following potentially hazardous airborne particles and/or fumes may be generated: Titanium dioxide an IARC Group 2B carcinogen. Hexavalent Chromium (Chromium VI) may cause lung, nasal, and/or sinus cancer. Soluble molybdenum compounds such as molybdenum trioxide may cause lung irritation.
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

**Inhalation**
Cobalt-containing alloys may cause sensitization by inhalation. May cause cancer by inhalation.

**Eye contact**
Product not classified.

**Skin Contact**
Nickel or Cobalt containing alloys may cause sensitization by skin contact.

**Ingestion**
Product not classified.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium 7440-32-6</td>
<td>&gt; 5000 mg/kg bw</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Aluminum 7429-90-5</td>
<td>15,900 mg/kg bw</td>
<td>-</td>
<td>&gt; 1 mg/L</td>
</tr>
<tr>
<td>Niobium (Columbium) 7440-03-1</td>
<td>&gt; 10,000 mg/kg bw</td>
<td>&gt; 2000 mg/kg bw</td>
<td>-</td>
</tr>
<tr>
<td>Tungsten 7440-33-7</td>
<td>&gt; 2000 mg/kg bw</td>
<td>&gt; 2000 mg/kg bw</td>
<td>&gt; 5.4 mg/L</td>
</tr>
<tr>
<td>Molybdenum 7439-98-7</td>
<td>&gt; 2000 mg/kg bw</td>
<td>&gt; 2000 mg/kg bw</td>
<td>&gt; 5.10 mg/L</td>
</tr>
<tr>
<td>Chromium 7440-47-3</td>
<td>&gt; 3400 mg/kg bw</td>
<td>-</td>
<td>&gt; 5.41 mg/L</td>
</tr>
<tr>
<td>Zirconium 7440-67-7</td>
<td>&gt; 5000 mg/kg bw</td>
<td>-</td>
<td>&gt; 4.3 mg/L</td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>550 mg/kg bw</td>
<td>&gt; 2000 mg/kg bw</td>
<td>&lt; 0.05 mg/L</td>
</tr>
<tr>
<td>Boron 7440-42-8</td>
<td>&gt; 2000 mg/kg bw</td>
<td>-</td>
<td>&gt; 5.08 mg/L</td>
</tr>
</tbody>
</table>

Information on toxicological effects

**Symptoms**
Nickel or Cobalt containing alloys may cause sensitization by skin contact. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Acute toxicity**
Cobalt-containing powders may be harmful if inhaled.

**Skin corrosion/irritation**
Product not classified.

**Serious eye damage/eye irritation**
Product not classified.

**Sensitization**
Nickel or Cobalt containing alloys may cause sensitization by skin contact. Cobalt-containing alloys may cause sensitization by inhalation.

**Germ cell mutagenicity**
Product not classified.

**Carcinogenicity**
May cause cancer by inhalation.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium 7440-47-3</td>
<td>Group 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>A3</td>
<td>Group 2A</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group 2B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reproductive toxicity**
Product not classified.

**STOT - single exposure**
Product not classified.

**STOT - repeated exposure**
Product not classified.

**Aspiration hazard**
Product not classified.

12. ECOLOGICAL INFORMATION
Ecotoxicity

This product as shipped is classified for aquatic chronic toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium 7440-32-6</td>
<td>The 72 h EC50 of titanium dioxide to Pseudokirchneriella subcapitata was 61 mg of TiO2/L.</td>
<td>The 96 h LC50 of titanium dioxide to Cyprinodon variegatus was greater than 10,000 mg of TiO2/L. The 96 h LC50 of titanium dioxide to Pimephales promelas was greater than 1,000 mg of TiO2/L.</td>
<td>The 3 h EC50 of titanium dioxide for activated sludge were greater than 1000 mg/L.</td>
<td>The 48 h EC50 of titanium dioxide to Daphnia Magna was greater than 1000 mg of TiO2/L.</td>
</tr>
<tr>
<td>Aluminum 7429-90-5</td>
<td>The 96-h EC50 values for reduction of biomass of Pseudokirchneriella subcapitata in AAP-Medium at pH 6, 7, and 8 were estimated as 20.1, 5.4, and 150.6 µg/L, respectively, for dissolved Al.</td>
<td>The 96 h LC50 of aluminum to Oncorhynchus mykiss was 7.4 mg of Al/L at pH 6.5 and 14.6 mg of Al/L at pH 7.5</td>
<td>-</td>
<td>The 48-hr LC50 for Ceriodaphnia dubia exposed to Aluminium chloride increased from 0.72 to greater than 99.6 mg/L with water hardness increasing from 25 to 200 mg/L.</td>
</tr>
<tr>
<td>Niobium (Columbium) 7440-03-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tungsten 7440-33-7</td>
<td>The 72 h EC50 of sodium tungstate to Pseudokirchneriella subcapitata was 31.0 mg of W/L.</td>
<td>The 96 h LC50 of sodium tungstate to Danio rerio was greater than 106 mg of W/L.</td>
<td>The 30 min EC50 of sodium tungstate for activated sludge were greater than 1000 mg/L.</td>
<td>The 48 h EC50 of sodium tungstate to Daphnia magna was greater than 96 mg of W/L.</td>
</tr>
<tr>
<td>Molybdenum 7439-98-7</td>
<td>The 72 h EC50 of sodium molybdate dihydrate to Pseudokirchneriella subcapitata was 362.9 mg of Mo/L.</td>
<td>The 96 h LC50 of sodium molybdate dihydrate to Pimephales promelas was 644.2 mg/L.</td>
<td>The 3 h EC50 of molybdenum trioxide for activated sludge was 820 mg/L.</td>
<td>The 48 h LC50 of sodium molybdate dihydrate to Ceriodaphnia dubia was 1,015 mg/L. The 48 h LC50 of sodium molybdate dihydrate to Daphnia magna was greater than 1,727.8 mg/L.</td>
</tr>
<tr>
<td>Chromium 7440-47-3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Zirconium 7440-67-7</td>
<td>The 14 d NOEC of zirconium dichloride oxide to Chlorella vulgaris was greater than 102.5 mg of Zr/L.</td>
<td>The 96 h LL50 of zirconium to Danio rerio was greater than 74.03 mg/L.</td>
<td>-</td>
<td>The 48 h EC50 of zirconium dichloride oxide to Daphnia magna was greater than 74.03 mg of Zr/L.</td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>The 72 h EC50 of cobalt dichloride to Pseudokirchneriella subcapitata was 144 ug of Co/L.</td>
<td>The 96h LC50 of cobalt dichloride ranged from 1.5 mg Co/L, for Oncorhynchus mykiss to 85 mg Co/L for Danio rerio.</td>
<td>The 3 h EC50 of cobalt dichloride for activated sludge was 120 mg of Co/L.</td>
<td>The 48 h LC50 of cobalt dichloride ranged from 0.61 mg Co/L for Ceridaphnia dubia tested in soft, DOM-free water to &gt;1800mg Co/L for Tubifex tubifex in very hard water.</td>
</tr>
<tr>
<td>Boron 7440-42-8</td>
<td>The 72-h EC50 value for reduction of biomass of Pseudokirchneriella subcapitata exposed to Boric acid at pH 7.5 to 8.3 was 40.2 mg/L.</td>
<td>The 96-h LC50 for Pimephales promelas exposed to Boric acid (82%)/borax (18%) mixture was 79.7 mg/L with water hardness of 91 mg/L and water pH of 8.0.</td>
<td>The 3 h NOEC of boric acid for activated sludge ranged from 17.5 to 20 mg/L.</td>
<td>The 48-hr LC50 for Ceridaphnia dubia exposed to Boric acid/borax mixture ranged from 91 to 165 mg/L with pH ranging from 6.7 to 8.4.</td>
</tr>
</tbody>
</table>

Persistence and degradability

Bioaccumulation

Other adverse effects
13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA - D Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium</td>
<td>5.0 mg/L regulatory level</td>
</tr>
</tbody>
</table>

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

DOT
Regulated per 49 CFR, if quantity in an individual package equals or exceeds the reportable quantity (RQ) of 5000 pounds of chromium, 5000 pounds of copper, 100 pounds of nickel
UN/ID No. 3077 Environmentally hazardous substance, solid, n.o.s. (nickel alloy powder),
RQ
Hazard Class 9
Packing Group III
Special Provisions 8, 146, 335, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33
Emergency Response Guide Number Guide No. 171, Except for FIRE follow Guide No. 170

15. REGULATORY INFORMATION

International Inventories
TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL Complies
PICCS Not Listed
AICS Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>0 - 10</td>
<td>1.0</td>
</tr>
</tbody>
</table>
PM005 Titanium Alloy With Cobalt Non-Respirable Powder

Revision Date 03-Jan-2019

Cobalt - 7440-48-4  7440-48-4  0.1 - 2  0.1

SARA 311/312 Hazard Categories
- Acute health hazard: Yes
- Chronic Health Hazard: Yes
- Fire hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium 7440-47-3</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium 7440-47-3</td>
<td>5000 lb</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product contains the Proposition 65 chemicals listed below. Proposition 65 warning label available at ATImetals.com.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt - 7440-48-4</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium 7440-32-6</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum 7429-90-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tungsten 7440-33-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Molybdenum 7439-98-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Chromium 7440-47-3</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Zirconium 7440-67-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA
- Health hazards: 1
- Flammability: 0
- Instability: 0
- Physical and Chemical Properties -

HMIS
- Health hazards: 2*
- Flammability: 1
- Physical hazards: 0
- Personal protection: X

Chronic Hazard Star Legend
* = Chronic Health Hazard

Issue Date 17-Jul-2014
Revision Date 03-Jan-2019
Revision Note Updated Section(s): 2, 3, 4, 5, 7, 8, 9, 15
Note: The information provided in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Additional information available from: Safety data sheets and labels available at ATImetals.com