SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Titanium alloy, Grade 1 Titanium, Beta Titanium

Product name : TNT archwires, Retainium, and Extend System Wires

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For professional use only.

1.3. Details of the supplier of the safety data sheet

Manufacturer:
Reliance Orthodontic Products Inc.
1540 West Thorndale Ave.
Itasca, IL 60143 USA
630-773-4009, during normal business hours

1.4. Emergency telephone number

CHEMTREC - 24-Hour Hazmat Emergency Communications Center : Domestic: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Non-hazardous in solid, bulk form and is not classified according to the Global harmonized System (GHS) and is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1920.1200). “Massive” metal products are generally classified as “articles” and do not constitute hazardous materials in solid form.

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS02

GHS09

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : Bulk, solid material is non-hazardous
Flammable Solid = Cat#1, H228 (dust)
Water-reactive=Cat#2, H261 (dust)
Aquatic Acute Hazard=Cat#1, H400
Aquatic Chronic Hazard=Cat#3, H412
HNOS Combustible Dust

Precautionary statements (GHS-US) : Bulk, solid material is non-harzardous

2.3. Other hazards

Not Applicable

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance that the device may encounter on production line during manufacturing:

Chemical Name	CAS No.	Weight-%
Titanium (Total)	13463-67-7	60 - 85
Titanium (Total)	13463-67-7	0 - 5
Iron	1309-37-1	0 - 0.42
Aluminum	7429-90-5	0 - 8
Molybdenum	7439-98-7	10 - 20
Chromium	7440-47-3	0 - 11
Vanadium	1314-62-1	0 - 5.15
Zirconium	7440-67-7	5 - 10

Tin	7440-31-5	1 - 5
Copper	7440-50-8	0 - 0.2
Carbon	1333-86-4	0 – 0.1
Tantalum	7440-25-7	0 - 1

SECTION 4: First aid measures

4.1. Description of first aid measures

inhalation : If excessive amounts of smoke, fume, or particulate are inhaled during processing, remove to fresh air and consult a qualified health professional.

skin contact : In the case of skin irritation or allergic reactions see a physician.

eye contact : Dust may cause irritation. In the case of eye contact, flush with large amounts of water for at least 15 minutes and seek immediate medical attention.

ingestion : Can cause gastrointestinal effects if swallowed.

4.2. Most important symptoms and effects, both acute and delayed

Exposure to dust or metal fumes may irritate respiratory system and result in metal fume fever.

May cause allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use dry sane, dry chemical, CO2 or Class D 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.

5.2. Special hazards arising from the substance or mixture

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. Vanadium pentoxide (V2O5) affects eyes, skin, respiratory system, Soluble molybdenum compounds such as molybdenum trioxide may cause lung irritation.

Explosion data

Sensitivity to Mechanical Impact None. **Sensitivity to Static Discharge** None.

5.3. Advice for firefighters

Firefighting instructions : Use self-contained breathing apparatus

Protection during firefighting : No data available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective Equipment Use appropriate personal protective equipment based on site conditions.

Emergency procedures : Avoid breathing dust or fumes. Use adequate ventilation. Remove all ignition sources if dust is present. Note that dust and fine shavings may be flammable.

6.1.2. For emergency responders

Protective equipment : Use appropriate personal protective equipment based on site conditions.

Emergency procedures : Control ignition sources and use non-sparking tools when handling dust or finely ground turnings which may be flammable.

6.2. Environmental precautions

Not applicable to massive product.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Not applicable to massive product.

6.4. Reference to other sections

See Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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.

7.2. Conditions for safe storage, including any incompatibilities

Conditions for Safe Storage : Keep chips, turnings, dust, and other small particles away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatibilities : 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.

7.3. Specific end use(s)

Apart from those mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH (mg/m^3)
Titanium 13463-67-7	10 mg/m^3	15 mg/m^3	-
Aluminum 7429-90-5	TWA: 1 mg/m^3 respirable fraction Dust=10, Fume=5, Soluble Salt=2	TWA: 15 mg/m^3 total dust TWA: 5 mg/m^3 respirable fraction	Dust=10, Resp.=5 Fume=5, Soluble Salt=2
Molybdenum 7439-98-7	TWA: 10 mg/m^3 inhalable fraction TWA: 3 mg/m^3 respirable fraction Soluble = 5 Insoluble = 15	Soluble = 5 Insoluble = 15	REL=10, IDLH=5000(soluble comp=1000)
Zirconium 7440-67-7	STEL: 10 mg/m^3 STEL: 10 mg/m^3 Zr TWA: 5 mg/m^3 TWA: 5 mg/m^3 Zr	TWA: 5 mg/m^3 Zr (vacated) STEL: 10 mg/m^3 (vacated) STEL: 10 mg/m^3 Zr	REL=10, STEL: 10 Comp=25 as Zr
Vanadium 1314-62-1	0.05 mg/m^3 dust and fume	Ceiling: 0.5 mg/m^3 V2O5 respirable dust Ceiling: 0.1 mg/m^3 V2O5 fume	Compounds only=0.05 Comp=35 as V
Chromium 7440-47-3	TWA: 0.5 mg/m^3 TWA: 1 mg/m^3 Cr Metal=0.5, Cr^{+3} =0.5, Soluble Cr^{+6}=0.05, Insol. Cr^{+6}=0.01	TWA: 1 mg/m^3 Cr Metal=1, Insoluble Cr salts=1, Cr^{+2} compounds=0.5, Cr^{+3} compounds=0.5, Cr^{+6} compounds=0.005, Cr^{+2} action level=0.0025	REL=0.5, Cr^{+2}=205, Cr=250, Cr^{+3} =25
Tin 7440-31-5	TWA: 2 mg/m^3 TWA: 2 mg/m^3 Sn except Tin hydride	TWA: 2 mg/m^3 Sn except oxides (inorganic) 0.1 (organic)	REL=2 IDLH: 100
Iron 1309-37-1	5 mg/m^3	10 mg/m^3	REL Fe salts =1
Carbon 1333-86-4	3.5 mg/m^3	3.5, Total=15, Respirable=5	-
Tantalum 7440-25-7	5 mg/m^3	5 mg/m^3	-
Copper 7440-50-8	Dust=1 Fume=0.02 mg/m^3	Dust=1 Fume=0.01 mg/m^3	-

8.2. Exposure controls

8.2.1 Appropriate Engineering Controls : Provide local exhaust when cutting, grinding, or heating. Use good industrial hygiene practices. Keep dust and fume buildup to a minimum and avoid ghenerations of uncontrolled particles. Avoid static discharge where dust or turnings are generated.

8.2.2 Personal Protective Equipment:

- 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.

- Skin and body Protection : Fire/flame resistant/retardant clothing may be appropriate during hot work with the product. Cut-resistant gloves and/or protective clothing may be appropriate when sharp surfaces are present.

- 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.
- Pictograms for Personal Protective Equipment :

- General Hygiene Considerations : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Color	:	Metallic, gray or silver
Odor	:	No odor/orderless
Solubility in water	:	Insoluble
pH	:	Not applicable
Boiling point	:	Not applicable
Melting point	:	Not applicable
Decomposition temperature	:	Not applicable
Evaporation rate	:	Not applicable
Vapor Density	:	Not applicable
Vapor pressure	:	Not applicable
Density	:	Not applicable
Percent Volatile Organic Compound (VOC)	:	None

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Not applicable.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing. Hazarous polymerization does not occur.

10.4. Conditions to avoid

Dust formation and dust accumulation.

10.5. 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.

10.6. 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. Vanadium pentoxide (V2O5) affects eyes, skin, respiratory system, Soluble molybdenum compounds such as molybdenum trioxide may cause lung irritation.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Inhalation	:	Not an expected route of exposure for product in massive form, but inhalation of metal particulate or elemental oxide fumes generated during welding, burning, grinding, machining, melting, sawing, brazing, buffing, polishing, or sweeping may pose acute or chronic health effects.
Eye contact	:	Not an expected route of exposure for product in massive form, but high concentration of dust may cause irritation to the eyes.
Skin contact	:	Not applicable.
Ingestion	:	Not an expected route of exposure for product in massive form. Ingestion of metal particulate may cause acute gastrointestinal effects.

Lethal Dose Toxicity by Individual Component

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Titanium 13463-67-7	> 5000 mg/kg bw	-	-
Aluminum 7429-90-5	-	-	> 1 mg/L
Molybdenum 7439-98-7	-	-	-
Zirconium 7440-67-7	-	-	-
Vanadium 1314-62-1	> 2000 mg/kg bw	-	-
Chromium 7440-47-3	-	-	-
Tin 7440-31-5	-	-	-
Iron 1309-37-1	98,600 mg/kg bw	-	> 0.25 mg/L
Carbon 1333-86-4	-	-	-
Copper 7440-50-8	Unknown	-	-
Tantalum 7440-25-7	-	-	-

Hazard information (Carcinogen, Specific Target Organ Toxicity – Repeat & Single Exposure, Reproduction Toxicity, Germ Cell Mutagenic, Skin Sensitizer, etc.)

Chemical Name	ACGIH	IARC	NIOSH	NTP	GHS Classification
Titanium 13463-67-7	-	-	-	-	 GHS02
Aluminum 7429-90-5	-	-	-	-	 GHS02  GHS09
Molybdenum 7439-98-7	-	-	-	-	HNOS Combustible Dust
Zirconium 7440-67-7	Zr&Compounds=A4	-	-	-	 GHS02
Vanadium 1314-62-1	-	-	-	-	 GHS02
Chromium 7440-47-3	-	Metal&Cr^{+3}=3	-	-	HNOS Combustible Dust
Tin 7440-31-5	A4	-	-	-	HNOS Combustible Dust
Iron 1309-37-1	-	-	-	-	None
Carbon 1333-86-4	-	-	-	-	HNOS Combustible Dust
Copper 7440-50-8	-	-	-	-	None
Tantalum 7440-25-7	-	-	-	-	None

ACGIH carcinogen: A1=confirmed in humans; A2=suspected in humans; A3-confirmed in animals with unknown relevance to humans; A4=not classifiable in humans; A5=not suspected
IARC human carcinogen: 1=yes; 2=probably; 2B=possibly 3=not classifiable in humans
NIOSH carcinogen: Entry box=yes is potential occupational carcinogen
NTP carcinogen: K=Known to be; R=reasonably anticipated
OSHA: Yes=OSHA regulated as carcinogen (29 CFR part 1910 Subpart Z)

Aluminum (Al): Can irritate eyes, skin, and/or respiratory system. Concentrations of 5000 mg/m^3 of 5 microns in size have reportedly caused fibrosis. Finely divided dust may easily ignite and may cause explosions. Reacts with acid, other metals, halogens, carbon disulfide, or methyl chloride. See aluminum oxide.

Carbon (C): Nuisance dust. Powder or granular dust can mix with air to spontaneously ignite and/or explode. Dry dust can be charged electrostatically by swirling, pouring, moving, etc. Reactions can form carbon monoxide. As a strong reducing agent, it can react violently with oxidants such as bromates, chlorates and nitrates.

Chromium (Cr, Cr^{+3}, Cr^{+6}): The toxicity of chromium is dependent on oxidation sate. IARC lists certain hexavalent chromium compounds under is Group 1 category "confirmed carcinogenicity to humans" and metallic chromium under its Group 3 category "not classifiable as to their carcinogenicity to humans." Chromium metal is classified as carcinogenic by MTP. Dermatitis may result from exposure to chromium fumes. If metal is heated to high temperatures, as in welding, fumes produced may be toxic to the lungs. Under high temperatures, hexavalent chromium may be produced, if in the insoluble form it is designated a confirmed human carcinogen. Other health effects include nasal irritation and possible kidney and liver damage. Chromite dust may also cause skin ulceration, dermatitis and allergic skin reaction.

Copper (Cu): Inhalation of metal particulate or elemental oxide fumes generated during welding, burning, grinding or machining may pose acute or chronic health effects. In finely divided form, skin contact may produce localized irritation and/or contact dermatitis

Iron (Fe): Iron salts can irritate eyes, skin, and mucous membrane. Other targets are the respiratory system and gastrointestinal tract. Exposure can cause abdominal pain, diarrhea, vomiting, and possible liver damage.

Molybdenum (MO): Available toxicology data contain no evidence that an acute exposure to a high concentration of molybdenum would impede escape or cause any irreversible health effects within 30 minutes. Mining and metallurgy workers chronically exposed to 60 to 600 mg Mo/m3 reported an increased incidence of nonspecific symptoms that included weakness, fatigue, headache, anorexia, and joint and muscle pain. Animal studies involving ingestion (6000 mg Mo/kg) and inhalation (30,000 mg Mo/m3 for 4 weeks or 12,000 mg MoO^2/m3 for 1 hour) showed no changes and/or fatalities. Molybdenum trioxide is an irritant to the eyes and mucous membranes. Fine particles can mix with air to explode. React violently with oxidants, halogens and concentrated nitric acid causing fire.

Tantalum (Ta): Short-term exposure can irritate eyes (redness), skin, and respirator,' system (cough), and can cause pulmonary irritation in animals. Considered to have a low order of toxicity. As surgical implant material, it has demonstrated physiological inertness. Reactive with strong oxidizers, bromine trifluoride, and fluorine. Dry fine particles can ignite spontaneously and/or form explosive mixtures on contact with air.

Tin (Sn): Irritates eye (redness, pain), skin, and respiratory system (cough). Animal testing revealed vomiting, diarrhea, paralysis with muscle twitching, and cancerous lung tumours. Reactive with chlorine, turpentine, acids, and alkalis. Dry fine particles can ignite spontaneously and/or form explosive mixtures on contact with air.

Titanium (Ti): A mild pulmonary irritant generally regarded as a nuisance dust.

Vanadium (V): No information found.

Zirconium (Zr): Short term exposure may cause mechanical irritation to eyes. Long term exposure might affect lungs. Considered to have a low order of toxicity. Skin rash has been associated with exposure to deodorants containing zirconium. Reacts with borax, carbon tetrachloride when heated, and explosively when heated with alkali metal hydroxides.

There is no Information on toxicological effects.

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

Acute toxicity	Product not classified.
Skin corrosion/irritation	Product not classified.
Serious eye damage/eye irritation	Product not classified.
Sensitization	Product not classified.
Germ cell mutagenicity	Product not classified.
Carcinogenicity	Product not classified.

Chemical Name	ACGIH	IARC	NTP	OSHA
Chromium 7440-47-3		Group 3		

Reproductive toxicity:	Product not classified.
STOT - single exposure:	Product not classified.
STOT - repeated exposure:	Product not classified.
Aspiration hazard:	Product not classified.

SECTION 12: Ecological information

12.1. Ecotoxicity

This product as shipped is not classified for aquatic toxicity, however, individual components of the material have been found to be toxic to the environment.

Other Adverse Effects: Dissolved metals can be dangerous to drinking water aquifer even in small quantities.

Ecotoxicity Effects listed below by individual component.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Titanium	-	-	-	-
Aluminum 7429-90-5	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.	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	-	The 48-hr LC50 for Ceriodaphnia dubia exposed to Aluminum chloride increased from 0.72 to greater than 99.6 mg/L with water hardness increasing from 25 to 200 mg/L.

Molybdenum 7439-98-7	The 72 h EC50 of sodium molybdate dihydrate to Pseudokirchneriella subcapitata was 362.9 mg of Mo/L.	The 96 h LC50 of sodium molybdate dihydrate to Pimephales promelas was 644.2 mg/L	The 3 h EC50 of molybdenum trioxide for activated sludge was 820 mg/L.	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.
Zirconium 7440-67-7	The 14 d NOEC of zirconium dichloride oxide to Chlorella vulgaris was greater than 102.5 mg of Zr/L.	The 96 h LL50 of zirconium to Danio rerio was greater than 74.03 mg/L.	-	The 48 h EC50 of zirconium dioxide to Daphnia magna was greater than 74.03 mg of Zr/L.
Vanadium 1314-62-1	The 72 h EC50 of vanadium pentoxide to Desmodesmus subspicatus was 2,907 ug of V/L.	The 96 h LC50 of vanadium pentoxide to Pimephales promelas was 1,850 ug of V/L.	The 3 h EC50 of sodium metavanadate for activated sludge was greater than 100 mg/L.	The 48 h EC50 of sodium vanadate to Daphnia magna was 2,661 ug of V/L.
Chromium 7440-47-3	-	-	-	-
Tin 7440-31-5	The 72 h EC50 of tin chloride pentahydrate to Pseudokirchnerella subcapitata was 9,846 ug of Sn/L	The 7 d LOEC of tin chloride pentahydrate to Pimephales promelas was 827.9 ug of Sn/L	-	The 7 d LC50 of tin chloride pentahydrate to Ceriodaphnia dubia was greater than 3,200 ug of Sn/L.
Iron 1309-37-1	-	The 96 h LC50 of 50% iron oxide black in water to Danio rerio was greater than 10,000 mg/L.	The 3 h EC50 of iron oxide for activated sludge was greater than 10,000 mg/L.	The 48 h EC50 of iron oxide to Daphnia magna was greater than 100 mg/L.

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB Assessment

No data available

12.5. Other Adverse Effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste Treatment Methods : Recycle when possible. When disposed of as a waste, it would be considered hazardous waste when chromium constituent is present. Wastes must be tested using methods described in 40 CFR Part 261. It is the generators responsibility to determine if the waste meets applicable definitions of hazardous wastes. Dispose of waste material according to Local, State, Federal and Provincial Environmental Regulations.

Packaging Disposal : Dispose of containers in compliance with local, state, and federal regulations. When possible, use metal containers and recycle along with metal material.

Chemical Name	RCRA - D Series Wastes
Chromium 7440-47-3	5.0 mg/L regulatory level

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

SECTION 14: Transport information

Not regulated as a dagnerous good per US DOT 49 CFR 171-180 or UN Dangerous Goods List or *as disposed waste, it could become (when chromium is present):

14.1 UN NUmber

Not Assigned or *UN3077

14.2 UN Proper Shipping Name

Not Applicable or *Environmentally hazardous substances, sold, n.o.s

14.3 Transport Hazard Class

Not Regulated – no hazard assigned or *9

14.4 Packing Group

Not Applicable or *PG III

14.5 Environmental Hazards

No data Available

14.6 Transport in Bulk

Not Applicable

14.7 Special Precaution for User

No Special Precautions

14.8 Labels

Not Applicable or *Miscellaneous Dangerous Good Label

15.1. Safety, Health and Environmental regulations/legislation specific for substance or mixture

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:

Chemical Name	CAS No.	EPCRA SARA 313	Weight-%	SARA 313 - Threshold Values %
Chromium	7440-47-3	Yes	0 - 10	1.0
Aluminum	7429-90-5	fume and dust only	0 - 8	1.0 fume and dust only
Vanadium	1314-62-1	Yes, except when in alloy	0 - 5.15	1, except in alloy

SARA 311/312 Hazard Categories

Chemical Name	CAS No.	EPCRA SARA	Weight-%	SARA 313 - Threshold Values %
Chromium	7440-47-3	-	0 - 10	1.0
Aluminum	7429-90-5	Chronic	0 - 8	1.0 fume and dust only

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). The following lists of regulation may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Chromium 7440-47-3		X	X	

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)

Chemical Name	Hazardous Substances RQs
Chromium 7440-47-3	5000 lb

California Proposition 65

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

Chemical Name	California Proposition 65

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Titanium 13463-67-7	X		
Aluminum 7429-90-5	X	X	X
Molybdenum 7439-98-7	X	X	X
Zirconium 7440-67-7	X	X	X
Vanadium 1314-62-1	X	X	X
Chromium 7440-47-3	X	X	X
Tin 7440-31-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

SECTION 16: Other information

NFPA Rating	HMIS Rating
Health Hazard: 0	Health Hazard: 1 (Chronic health hazard)
Fire Hazard: 0	Fire Hazard: 0
Reactivity Hazard: 0	Reactivity Hazard: 0

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.