

Safety Data Sheet

Section 1: Identification

Product identifier

Product Name • **Zinc Strip – Alloy Series 190, 310, 500, 600, 700, 800**

Synonyms • Strip Zinc Material; Zinc Coil

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

Recommended use • Consult manufacturer for the recommended product use

Details of the supplier of the safety data sheet

Manufacturer • Jarden Zinc Products, LLC
P.O. Box 1890
Greeneville, TN 37744-1890
United States
Jardenzinc.com
jwinters@jardenzinc

Telephone (General) • 423-639-8111

Emergency telephone number

Manufacturer • 800-424-9300 - CHEMTREC

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012 • Reproductive Toxicity 1B
Combustible Dust
Hazards Not Otherwise Classified - Health Hazards - Metal fume fever

Label elements

OSHA HCS 2012

DANGER



Hazard statements • May damage fertility or the unborn child.
May form combustible dust concentrations in air.

Precautionary statements

Prevention • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.

Response • IF exposed or concerned: Get medical advice/attention.

Storage/Disposal • Store locked up.

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance.

Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Zinc (Pyrophoric)	CAS:7440-66-6	> 99%	NDA	OSHA HCS 2012: Hazard Not Otherwise Classified - Health Hazard - Metal fume fever; Comb. Dust	NDA
Titanium, massive	CAS:7440-32-6	0% TO 0.95%	NDA	OSHA HCS 2012: Not Classified	NDA
Manganese (powder)	CAS:7439-96-5	0% TO 0.95%	Ingestion/Oral-Rat LD50 • 9 g/kg	OSHA HCS 2012: Eye Irrit. 2	NDA
Copper	CAS:7440-50-8	0% TO 0.95%	NDA	OSHA HCS 2012: Comb. Dust; Repr. 1B (Orl); STOT SE 1 (Kidney, Orl); STOT SE 3: Resp. Irrit.; STOT RE 2 (Liver, Orl)	NDA
Lead, powder	CAS:7439-92-1	0% TO 0.03%	NDA	OSHA HCS 2012: Exposure Limits	NDA
Cadmium (pyrophoric)	CAS:7440-43-9	0% TO 0.02%	Ingestion/Oral-Rat LD50 • 2330 mg/kg	OSHA HCS 2012: Exposure Limits	NDA
Aluminum powder, stabilized	CAS:7429-90-5	0% TO 0.02%	NDA	OSHA HCS 2012: Exposure Limits	NDA

Section 4: First-Aid Measures

Description of first aid measures

Inhalation

- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. If irritation develops and persists, get medical attention.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- Do NOT induce vomiting. Obtain medical attention immediately if ingested.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials

other than this product may have occurred.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media • LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

Unsuitable Extinguishing Media • No data available

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Hazardous Combustion Products • Metal Oxide.

Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions • Ventilate enclosed areas. Do not walk through spilled material. Use appropriate Personal Protective Equipment (PPE)

Emergency Procedures • ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away.

Environmental precautions

- Avoid run off to waterways and sewers.

Methods and material for containment and cleaning up

Containment/Clean-up Measures • Avoid generating dust.
Use clean nonsparking tools to collect material.
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Section 7 - Handling and Storage

Precautions for safe handling

Handling • Use only with adequate ventilation. Keep away from heat, sparks, and flame. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Conditions for safe storage, including any incompatibilities

Storage • Keep container closed. Store in a cool, dry, well-ventilated place. Keep dry. Melting wet zinc may contribute to explosion hazard.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Cadmium (pyrophoric) (7440-43-9)	Ceilings	Not established	Not established	0.3 mg/m ³ Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, fume); 0.6 mg/m ³ Ceiling (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect, dust)
	TWAs	0.01 mg/m ³ TWA; 0.002 mg/m ³ TWA (respirable fraction)	Not established	0.1 mg/m ³ TWA (fume, applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect); 0.2 mg/m ³ TWA (dust, applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect); 5 µg/m ³ TWA
Manganese (powder)	Ceilings	Not established	Not established	5 mg/m ³ Ceiling (fume)
	TWAs	0.02 mg/m ³ TWA (respirable fraction); 0.1 mg/m ³ TWA (inhalable fraction)	1 mg/m ³ TWA (fume)	Not established
	STELs	Not established	3 mg/m ³ STEL	Not established
Copper (7440-50-8)	TWAs	0.2 mg/m ³ TWA (fume)	1 mg/m ³ TWA (dust and mist); 0.1 mg/m ³ TWA (fume)	0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)
Lead, powder (7439-92-1)	TWAs	0.05 mg/m ³ TWA	0.050 mg/m ³ TWA	50 µg/m ³ TWA
Aluminum powder, stabilized (7429-90-5)	TWAs	1 mg/m ³ TWA (respirable fraction)	10 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable dust)	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)

Exposure controls

Engineering Measures/Controls

- Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment). It is recommended that dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Use only appropriately classified electrical equipment.

Personal Protective Equipment

Respiratory

- For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

STEL = Short Term Exposure Limits are based on 15-minute exposures

NIOSH = National Institute of Occupational Safety and Health

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

OSHA = Occupational Safety and Health Administration

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	An odorless, bluish-white metal.
Color	Bluish-white	Odor	Odorless
Odor Threshold	No data available		
General Properties			
Boiling Point	907 °C(1664.6 °F)	Melting Point/Freezing Point	420 °F(215.5556 °C)
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	= 7.14 Water=1	Water Solubility	Negligible < 0.1 %
Viscosity	No data available		
Volatility			
Vapor Pressure	1 mmHg (torr) @ 487 °F(252.7778 °C)	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	No data available	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Stable under normal temperatures and pressures.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Avoid generating dust. Keep away from heat, sparks and flame.

Incompatible materials

- Acids and alkalis react to evolve hydrogen gas.

Hazardous decomposition products

- Oxides/fumes from metals.

Section 11 - Toxicological Information

Information on toxicological effects

Components		
Zinc (Pyrophoric) (> 99%)	7440 -66- 6	Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; Tumorigen / Carcinogen: Ingestion/Oral-Mouse TDLo • 12.6 mg/kg 46 Week(s)-Continuous; <i>Tumorigenic:</i> Carcinogenic by RTECS criteria; Gastrointestinal:Tumors; Tumorigenic:Facilitates action of known carcinogen
Copper (0% TO 0.95%)	7440 -50- 8	Acute Toxicity: Ingestion/Oral-Mouse TDLo • 108 mg/kg; <i>Behavioral:</i> Tremor; Gastrointestinal:Hypermotility, diarrhea; Gastrointestinal:Nausea or vomiting; Ingestion/Oral-Mouse TDLo • 158 mg/kg; <i>Kidney, Ureter, and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis);</i> Ingestion/Oral-Mouse TDLo • 232 mg/kg; <i>Kidney, Ureter, and Bladder:Changes primarily in glomeruli; Blood:Changes in spleen; Blood:Changes in serum composition (e.g., TP, bilirubin cholesterol);</i> Multi-dose Toxicity: Ingestion/Oral-Rabbit TDLo • 3 g/kg 60 Day(s)-Continuous; <i>Cardiac:Other changes; Liver:Hepatitis (hepatocellular necrosis), zonal; Related to Chronic Data:Death in the Other Multiple Dose data type field;</i> Reproductive: Ingestion/Oral-Rat TDLo • 152 mg/kg (22W pre); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Specific Developmental Abnormalities:Central nervous system;</i> Ingestion/Oral-Rat TDLo • 1210 µg/kg (35W pre); <i>Reproductive Effects:Effects on Fertility:Pre-implantation mortality; Reproductive Effects:Effects on Fertility:Post-implantation mortality;</i> Ingestion/Oral-Rat TDLo • 1520 µg/kg (22W pre); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system;</i> Tumorigen / Carcinogen: Ingestion/Oral-Mouse TDLo • 10.08 mg/kg 12 Week(s)-Continuous; <i>Tumorigenic:</i> Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Other changes
Titanium, massive (0% TO 0.95%)	7440 -32- 6	Reproductive: Ingestion/Oral-Rat TDLo • 158 mg/kg (multigeneration); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Effects on Embryo or Fetus:Fetal death</i>
Manganese (powder) (0% TO 0.95%)	7439 -96- 5	Acute Toxicity: Ingestion/Oral-Rat LD50 • 9 g/kg; Inhalation-Man TCLo • 2300 µg/m ³ ; <i>Brain and Coverings:Other degenerative changes; Behavioral:Changes in motor activity (specific assay); Behavioral:Muscle weakness;</i> Irritation: Eye-Rabbit • 500 mg 24 Hour(s) • Mild irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Mild irritation; Multi-dose Toxicity: Inhalation-Human TCLo • 0.5 mg/m ³ 39 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes; Peripheral Nerve and Sensation:Sensory change involving peripheral nerve;</i> <i>Behavioral:Irritability;</i> Inhalation-Mouse TCLo • 0.7 mg/m ³ 24 Hour(s) 22 Week(s)-Continuous; <i>Lungs, Thorax, or Respiration:Fibrosis (interstitial); Immunological Including Allergic:Decrease in cellular immune response;</i> Inhalation-Rat TCLo • 0.3 mg/m ³ 5 Hour(s) 26 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Fibrosis (interstitial); Immunological Including Allergic:Decrease in cellular immune response;</i> Reproductive: Ingestion/Oral-Mouse TDLo • 322.5 mg/kg (43D male); <i>Reproductive Effects:Paternal Effects:Spermatogenesis;</i> Ingestion/Oral-Rat TDLo • 50 mg/kg (20D post); <i>Reproductive Effects:Specific Developmental Abnormalities:Central nervous system; Reproductive Effects:Effects on Newborn:Biochemical and metabolic; Reproductive Effects:Effects on Newborn:Behavioral</i>

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012 • No data available
Skin corrosion/Irritation	OSHA HCS 2012 • No data available
Serious eye damage/Irritation	OSHA HCS 2012 • No data available
Skin sensitization	OSHA HCS 2012 • No data available
Respiratory sensitization	OSHA HCS 2012 • No data available
Aspiration Hazard	OSHA HCS 2012 • No data available
Carcinogenicity	OSHA HCS 2012 • No data available
Germ Cell Mutagenicity	OSHA HCS 2012 • No data available
Toxicity for Reproduction	OSHA HCS 2012 • Toxic to Reproduction 1B
STOT-SE	OSHA HCS 2012 • No data available
STOT-RE	OSHA HCS 2012 • No data available

Potential Health Effects

Inhalation

- Acute (Immediate)**
 - Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.
- Chronic (Delayed)**
 - No data available

Skin

- Acute (Immediate)**
 - Exposure to dust may cause mechanical irritation.
- Chronic (Delayed)**
 - No data available

Eye

- Acute (Immediate)**
 - Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.
- Chronic (Delayed)**
 - No data available

Ingestion

- Acute (Immediate)**
 - Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.
- Chronic (Delayed)**
 - No data available

Carcinogenic Effects

- This material contains a component that may cause cancer, however based on regulatory criteria this material is not classified as a carcinogen.

Carcinogenic Effects				
	CAS	OSHA	IARC	NTP
Cadmium (pyrophoric)	7440-43-9	Specifically Regulated Carcinogen	Group 1-Carcinogenic	Known Human Carcinogen
Lead, powder	7439-92-1	Not Listed	Group 2A-Probable Carcinogen	Reasonably Anticipated to be Human Carcinogen

Reproductive Effects

- Repeated and prolonged exposure may cause reproductive effects.

Other information

- Heating above the melting point releases metallic oxides which may cause metal fume fever which is an influenza like illness. Symptoms include headache, metallic taste in the mouth, cough, thirst, throat irritation, shortness of breath, fever, sweating and pain in the limbs. This illness is not permanent and recovery usually occurs within 24-48 hours after onset.

Key to abbreviations

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

Toxicity

- Non-mandatory section - information about this substance not compiled for this reason.

Persistence and degradability

- Non-mandatory section - information about this substance not compiled for this reason.

Bioaccumulative potential

- Non-mandatory section - information about this substance not compiled for this reason.

reason.

Mobility in Soil

- Non-mandatory section - information about this substance not compiled for this reason.

Other adverse effects

- Non-mandatory section - information about this substance not compiled for this reason.

Section 13 - Disposal Considerations**Waste treatment methods****Product waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA

Special precautions for user • None specified.**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** • No data available**Section 15 - Regulatory Information****Safety, health and environmental regulations/legislation specific for the substance or mixture****SARA Hazard Classifications** • Chronic, Pressure(Sudden Release of)

Inventory		
Component	CAS	TSCA
Aluminum powder, stabilized	7429-90-5	Yes
Cadmium (pyrophoric)	7440-43-9	Yes
Copper	7440-50-8	Yes
Lead, powder	7439-92-1	Yes
Manganese (powder)	7439-96-5	Yes
Titanium, massive	7440-32-6	Yes
Zinc (Pyrophoric)	7440-66-6	Yes

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

- | | | |
|------------------------|-----------|------------|
| • Copper | 7440-50-8 | Not Listed |
| • Cadmium (pyrophoric) | 7440-43-9 | Not Listed |

• Lead, powder	7439-92-1	Not Listed
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed
U.S. - OSHA - Specifically Regulated Chemicals		
• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	5 µg/m3 TWA (See 29 CFR 1910.1027); 2.5 µg/m3 Action Level
• Lead, powder	7439-92-1	30 µg/m3 Action Level (See 29 CFR 1910.1025); 50 µg/m3 TWA (See 29 CFR 1910.1025)
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed

Environment**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	Not Listed
• Lead, powder	7439-92-1	Not Listed
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities		
• Copper	7440-50-8	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
• Cadmium (pyrophoric)	7440-43-9	10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
		10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)

• Lead, powder	7439-92-1	µm); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
		454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
• Zinc (Pyrophoric)	7440-66-6	
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities		
• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	Not Listed
• Lead, powder	7439-92-1	Not Listed
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	Not Listed
• Lead, powder	7439-92-1	Not Listed
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	Not Listed
• Lead, powder	7439-92-1	Not Listed
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
• Copper	7440-50-8	1.0 % de minimis concentration
• Cadmium (pyrophoric)	7440-43-9	0.1 % de minimis concentration
• Lead, powder	7439-92-1	0.1 % Supplier notification limit; 0.1 % de minimis concentration (when contained in stainless steel, brass, or bronze)

• Manganese (powder)	7439-96-5	1.0 % de minimis concentration
• Aluminum powder, stabilized	7429-90-5	1.0 % de minimis concentration (dust or fume only)
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	1.0 % de minimis concentration (dust or fume only)
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	Not Listed
• Lead, powder	7439-92-1	100 lb RT (this lower threshold does not apply to lead when it is contained in stainless steel, brass or bronze alloy)
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	carcinogen, 10/1/1987
• Lead, powder	7439-92-1	carcinogen, 10/1/1992
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	developmental toxicity, 5/1/1997
• Lead, powder	7439-92-1	developmental toxicity, 2/27/1987
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	4.1 µg/day MADL (oral)
• Lead, powder	7439-92-1	0.5 µg/day MADL
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Copper	7440-50-8	Not Listed
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• Cadmium (pyrophoric)	7440-43-9	0.05 µg/day NSRL (inhalation)
• Lead, powder	7439-92-1	15 µg/day NSRL (oral)
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	Not Listed
• Lead, powder	7439-92-1	female reproductive toxicity 2/27/87
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• Copper	7440-50-8	Not Listed
• Cadmium (pyrophoric)	7440-43-9	male reproductive toxicity, 5/1/97
• Lead, powder	7439-92-1	male reproductive toxicity, 2/27/87
• Manganese (powder)	7439-96-5	Not Listed
• Aluminum powder, stabilized	7429-90-5	Not Listed
• Titanium, massive	7440-32-6	Not Listed
• Zinc (Pyrophoric)	7440-66-6	Not Listed

Other Information

- **WARNING:** This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

Section 16 - Other Information

Revision Date	• 14/April/2016
Preparation Date	• 14/April/2016
Disclaimer/Statement of Liability	• The information herein is given in good faith but no warranty, expressed or implied, is made.
Key to abbreviations	
NDA = No Data Available	