

# SAFETY DATA SHEET

## 1. Identification

### Aluminum Bronze Alloys with Graphite Plugs

#### Product identifier

#### Other means of identification

##### Product code

C95200, C95210, C95220, C95400, C95420, C95500, C95510, C95600, C95700, C95800, C95900, AB2, ADV22, ADVANCE20, AMS-4640, AMS-4872, CA-104, CA954-A, CB954, CONCAST-380, CDA954JD, CLASS-1, CON-954, CuAl10Fe, CuAl10Fe2, CuAl10Ni, CuAl10Ni5, CuAl10Ni5F, CuAl10Ni-M, CuAl10NiP, CuAl11Ni, CuAl11Fe4, CuAl11FeNi, CuAl9Ni5Fe, RCB 954, Paper Rolls, Aluminum Bronze Solids

Manufacturing

#### Recommended use

Use in accordance with supplier's recommendations.

#### Recommended restrictions

## Manufacturer/Importer/Supplier/Distributor information

#### Company name

Anchor Lamina America Inc.

#### Address

3650 South Derenzy Road, Bellaire, Michigan 49615

#### Telephone

1-231-533-8646

#### Emergency phone number

1-800-424-9300

Chemtrec\_(24-hrs)

## 2. Hazard(s) identification

#### Physical hazards

Not classified.

#### Health hazards

Sensitization, respiratory

Category 1

Sensitization, skin

Category 1

Carcinogenicity

Category 2

Specific target organ toxicity, repeated exposure

Category 1 (lungs)

#### OSHA defined hazards

Combustible dust

#### Label elements



#### Signal word

Danger

#### Hazard statement

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. Causes damage to organs (lungs) through prolonged or repeated exposure by inhalation. May form combustible dust concentrations in air.

#### Precautionary statement

##### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Prevent dust accumulation to minimize explosion hazard. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Do not breathe fumes and dusts. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. Observe good industrial hygiene practices.

##### Response

If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. If exposed or concerned: Get medical advice/attention. In case of fire: Use special powder against metal fires, dry sand to extinguish.

<b>Storage</b>	Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	Hot or molten material may produce thermal burns.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%
Copper	7440-50-8	71-90
Aluminum	7429-90-5	7-16
Manganese	7439-96-5	0-14
Iron	7439-89-6	2-6.5
Nickel	7440-02-0	0-6
Cobalt	7440-48-4	0-3
Silicon	7440-21-3	0-1.5
Zinc	7440-66-6	<0.5
Tin	7440-31-5	<0.3
Graphite	7782-42-5	>0.5

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits. Dependent on the product, material may contain less than 0.5% graphite due to the amount of graphite plugs inserted.

### 4. First-aid measures

#### Inhalation

#### Skin contact

In case of exposure to fumes or particulates: Move to fresh air. Get medical attention if discomfort persists.

#### Eye contact

Contact with dust: Wash skin with soap and water. In case of allergic reaction or other skin disorders: Seek medical attention and bring along these instructions. In case of contact with hot or molten product, cool rapidly with water and seek immediate medical attention. Do not attempt to remove molten product from skin because skin will tear easily. Cuts or abrasions should be treated promptly with thorough cleansing of the affected area.

#### Ingestion

Contact with dust: Do not rub eyes. Remove any contact lenses. Flush eyes thoroughly with water, taking care to rinse under eyelids. If irritation persists, continue flushing for 15 minutes, rinsing from time to time under eyelids. If discomfort continues, consult a physician.

#### Most important symptoms/effects, acute and delayed

Rinse mouth thoroughly if dust is ingested. Only induce vomiting at the instruction of medical personnel. Get medical attention if any discomfort continues.

#### Indication of immediate medical attention and special treatment needed

Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye, mucous membranes and respiratory tract. Cough. Discomfort in the chest. Difficulty in breathing. Shortness of breath. Wheezing. May cause an allergic skin reaction. Dermatitis. Rash. Acute exposure to cobalt metal, dust, and fume may cause irritation of skin and eyes. In sensitized individuals, exposure causes an asthma-like attack, with wheezing, bronchospasm, and dyspnea. Prolonged exposure may cause chronic effects.

#### General information

Treat symptomatically. Symptoms may be delayed. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

### 5. Fire-fighting measures

#### Suitable extinguishing media

Get medical attention if any discomfort develops. Seek medical attention for all burns, regardless how minor they may seem. Show this safety data sheet to the doctor in attendance.

#### Unsuitable extinguishing media

Special powder against metal fires. Dry sand.

#### Specific hazards arising from the chemical

Do not use water or halogenated extinguishing media. Hot molten material will react violently with water resulting in spattering and fuming.

During fire, gases hazardous to health may be formed. In a fire, ferronickel may form highly toxic

Substances: iron carbonyl and nickel carbonyl, a known carcinogen.

**Special protective equipment and precautions for firefighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

**Firefighting equipment/instructions**

Move containers from fire area if you can do it without risk.

**General fire hazards**

Solid metal is not flammable; however, finely divided metallic dust or powder may form an explosive mixture with air.

**6. Accidental release measures**

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

Keep unnecessary personnel away. Ensure adequate ventilation. Avoid inhalation of dust and contact with skin and eyes. Avoid inhalation of fumes from heated product. Wear protective clothing as described in Section 8 of this safety data sheet.

**Methods and materials for containment and cleaning up**

Avoid dust formation. Collect dust using a vacuum cleaner equipped with HEPA filter. The vacuum cleaner should be explosion-proofed. If not possible, gently moisten dust before it is collected with shovel, broom or the like. Allow molten material to cool and solidify before disposal. Sweep up or gather material and place in appropriate container for disposal. This material and its container must be disposed of as hazardous waste.

**Environmental precautions**

Avoid release to the environment.

**7. Handling and storage**

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Persons susceptible for allergic reactions should not handle this product. Welding, burning, sawing, brazing, grinding or machining operations may generate fumes and dusts of metal oxides. Provide adequate ventilation. Avoid contact with sharp edges and hot surfaces. Avoid generation and spreading of dust and fumes. Avoid inhalation of dust and contact with skin and eyes. Avoid contact with hot or molten material. Dust clouds may be explosive under certain conditions. Take precautionary measures against static discharges when there is a risk of dust explosion. Use explosion-proof electrical equipment if airborne dust levels are high. To prevent and minimize fire or explosion risk from static accumulation and discharge, effectively bond and/or ground product transfer system. Wear appropriate personal protective equipment. Do not use water on molten metal. Do not eat, drink or smoke when using the product. Keep the workplace clean. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Keep dry. Store away from incompatible materials.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	PEL	15 mg/m <sup>3</sup>	Total dust.
		1 mg/m <sup>3</sup>	Respirable dust.
Cobalt (CAS 7440-48-4)	PEL	0.1 mg/m <sup>3</sup>	Dust and fume.
Copper (CAS 7440-50-8)	PEL	1 mg/m <sup>3</sup>	Dust and mist.
		0.1 mg/m <sup>3</sup>	Fume.
Manganese (CAS 7439-96-5)	Ceiling	5 mg/m <sup>3</sup>	Fume.
Nickel (CAS 7440-02-0)	PEL	1 mg/m <sup>3</sup>	
Silicon (CAS 7440-21-3)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
Tin (CAS 7440-31-5)	PEL	2 mg/m <sup>3</sup>	
Graphite (CAS 7782-42-5)	PEL	2.5mg/m <sup>3</sup>	Respirable

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Cobalt (CAS 7440-48-4)	TWA	0.02 mg/m <sup>3</sup>	
Copper (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
		0.2 mg/m <sup>3</sup>	Fume.
Manganese (CAS 7439-96-5)	TWA	0.1 mg/m <sup>3</sup>	Inhalable fraction.
		0.02 mg/m <sup>3</sup>	Respirable fraction.
Nickel (CAS 7440-02-0)	TWA	1.5 mg/m <sup>3</sup>	Inhalable fraction.
Graphite (CAS 7782-42-5)	TWA	2mg/m <sup>3</sup>	Respirable fraction.

## US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Tin (CAS 7440-31-5)	TWA	2 mg/m <sup>3</sup>	

## US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	Respirable. Welding fume or pyrophoric powder. Total
Cobalt (CAS 7440-48-4)	TWA	0.05 mg/m <sup>3</sup>	Dust and fume.
Copper (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
Manganese (CAS 7439-96-5)	STEL	3 mg/m <sup>3</sup>	Fume.
	TWA	1 mg/m <sup>3</sup>	Fume.
Nickel (CAS 7440-02-0)	TWA	0.015 mg/m <sup>3</sup>	
Silicon (CAS 7440-21-3)	TWA	5 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	Respirable. Total
Tin (CAS 7440-31-5)	TWA	2 mg/m <sup>3</sup>	

## Biological limit values

### Argentina. Biological Exposure Indexes (BEIs) (Decree 351/1979 )

Components	Value
Cobalt (CAS 7440-48-4)	15 µg/l

## Exposure guidelines

Follow standard monitoring procedures.

## Appropriate engineering controls

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust. Ventilate as needed to control airborne dust. Use explosion-proof ventilation equipment if airborne dust levels are high. Special ventilation should be used to convey finely divided metallic dust generated by grinding, sawing etc., in order to eliminate explosion hazards.

## Individual protection measures, such as personal protective equipment

### Eye/face protection

Wear dust-resistant safety goggles where there is danger of eye contact. In addition to safety glasses or goggles, a welding helmet with appropriate shaded shield is required during welding, burning, or brazing. A face shield is recommended, in addition to safety glasses or goggles, during sawing, grinding, or machining.

### Skin protection

#### Hand protection

Wear suitable protective gloves to prevent cuts and abrasions. When material is heated, wear gloves to protect against thermal burns. Suitable gloves can be recommended by the glove supplier.

#### Other

Wear suitable protective clothing.

### Respiratory protection

In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Seek advice from local supervisor.

### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

## General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated clothing should be laundered separately from other clothing to prevent potential cross-contamination. If possible, an industrial laundry service should be used to eliminate the possibility of contaminating the home environment. Handle in accordance with good industrial hygiene and safety practices. Observe any medical surveillance requirements.

## 9. Physical and chemical properties

Appearance	Shapes, Solids, Tubes & Turnings.
Physical state	Solid.
Form	Shapes, Solids, Tubes & Turnings. Yellow to red. <b>Graphite – dark gray/black</b>
Color	None.
Odor	None
Odor threshold	Not Available

<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	1814 - 1929.2 °F (990 - 1054 °C)
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Fine particles may form explosive mixtures with air.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	7.5 - 9
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble in water.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not applicable.
<b>Other information</b>	
<b>Bulk density</b>	0.27 - 0.32 lb/in <sup>3</sup> @ 68 F
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Massive metal is stable and non reactive under normal conditions of use, storage and transport.
<b>Possibility of hazardous reactions</b>	Contact with acids will release flammable hydrogen gas. Hot molten material will react violently with water resulting in spattering and fuming.
<b>Conditions to avoid</b>	Contact with incompatible materials. Avoid dust formation. Dust clouds may be explosive under certain conditions.
<b>Incompatible materials</b>	Acids. Ammonium nitrate. Fluoride. Halogens. Nitrates. Phosphorus. Strong oxidizing agents. Sulfur.
<b>Hazardous decomposition products</b>	Welding, burning, sawing, brazing, grinding or machining operations may generate dusts and fumes of metal oxides.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause allergic respiratory reaction. Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the mucous membranes and respiratory tract. In sensitized individuals, exposure causes an asthma-like attack, with wheezing, bronchospasm, and dyspnea. Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain.
<b>Skin contact</b>	May cause an allergic skin reaction. Hot or molten material may produce thermal burns. Workers allergic to nickel may develop eczema or rashes. Graphite- Wash affected area with soap and water before eating or smoking and at the end of the work shift.

**Eye contact** Molten material will produce thermal burns. Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye. Acute exposure to cobalt metal, dust, and fume may cause irritation of skin and eyes. **Safety glasses with side shields if there is a danger of flying particles.**

**Ingestion** Not relevant, due to the form of the product. However, ingestion of dusts generated during working operations may cause nausea and vomiting.  
Ingestion of cobalt may cause nausea, vomiting, diarrhea, and a sensation of hotness.

**Symptoms related to the physical, chemical and toxicological characteristics** Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the eye, mucous membranes and respiratory tract. Coughing. Discomfort in the chest. Difficulty in breathing. Shortness of breath. Wheezing. May cause an allergic skin reaction. Dermatitis. Rash. Acute exposure to cobalt metal, dust, and fume may cause irritation of skin and eyes. In sensitized individuals, exposure causes an asthma-like attack, with wheezing, bronchospasm, and dyspnea. Prolonged exposure may cause chronic effects.

**Information on toxicological effects**

**Acute toxicity** Not expected to be acutely toxic.

Components	Species	Test Results
Copper (CAS 7440-50-8)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	> 2.77 mg/l, 4 hours
<i>Oral</i>		
LD50	Rat	481 mg/kg
Iron (CAS 7439-89-6)		
<b>Acute</b>		
<i>Inhalation</i>		
LD50	Rat	> 5 mg/kg
<i>Oral</i>		
LD50	Rat	98.6 g/kg
Manganese (CAS 7439-96-5)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50/LC90	Rat	> 1500 mg/m <sup>3</sup> , 4 hours
<i>Oral</i>		
LD50	Rat	9000 mg/kg
Nickel (CAS 7440-02-0)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 9000 mg/kg
Silicon (CAS 7440-21-3)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	3150 mg/kg

**Skin corrosion/irritation** May cause irritation through mechanical abrasion.

**Serious eye damage/eye irritation** Dust from machining operation in the eyes will cause irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin sensitization** May cause an allergic skin reaction. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Pre-existing skin conditions including dermatitis might be aggravated by exposure to this product.

**Germ cell mutagenicity** This product is not classified as a mutagen.

**Carcinogenicity** Suspected of causing cancer.

## IARC Monographs. Overall Evaluation of Carcinogenicity

Cobalt (CAS 7440-48-4)

2B Possibly carcinogenic to humans.

Nickel (CAS 7440-02-0)

2B Possibly carcinogenic to humans.

## NTP Report on Carcinogens

Nickel (CAS 7440-02-0)

Reasonably Anticipated to be a Human Carcinogen.

## OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not regulated.

<b>Reproductive toxicity</b>	Not classified. In experimental animal studies, cobalt produces adverse developmental effects at doses that produce maternal toxicity. There are no human data on cobalt exposure during pregnancy. Nickel: Has shown teratogenic effects in laboratory animals.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Causes damage to organs (lungs) through prolonged or repeated exposure by inhalation.
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.
<b>Chronic effects</b>	Danger of cumulative effects. Chronic inhalation of high concentrations of iron oxide fumes or dust may lead to benign pneumoconiosis (siderosis). Prolonged and repeated overexposure to dust and fumes can lead to benign pneumoconiosis (stannosis). Chronic exposure to breathing low levels of manganese dust or fume over a long period of time can result in "manganism," a disease of the central nervous system similar to Parkinson's Disease, gait impairment, muscle spasms and behavioral changes. Chronic inhalation of metallic oxide dust/fume may cause metal fume fever.
<b>Further information</b>	Welding or plasma arc cutting of metal and alloys can generate ozone, nitric oxides and ultraviolet radiation. Ozone overexposure may result in mucous membrane irritation or pulmonary discomfort. UV radiation can cause skin erythema and welders flash.

## 12. Ecological information

**Ecotoxicity** Alloys in massive forms present a limited hazard for the environment.

**Persistence and degradability** Not relevant for inorganic substances.

**Bioaccumulative potential** The product contains potentially bioaccumulating substances.

**Mobility in soil** Alloys in massive forms are not mobile in the environment.

**Mobility in general** Alloys in massive forms are not mobile in the environment.

**Other adverse effects** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
**Graphite dust is normally not explosive, but it may weakly contribute if the event is initiated**

by another explosive dust or gas.

## 13. Disposal considerations

**Disposal instructions** This material and its container must be disposed of as hazardous waste. Dispose in accordance with all applicable regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** Not regulated.

**Waste from residues / unused products** Recover and recycle, if practical. Solid metal and alloys in the form of particles may be reactive. Its hazardous characteristics, including fire and explosion, should be determined prior to disposal.

**Contaminated packaging** Not applicable.

## 14. Transport information

**DOT**  
Not regulated as dangerous goods.

**IATA**  
Not regulated as dangerous goods.

**IMDG**  
Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not applicable



## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated

### CERCLA Hazardous Substance List (40 CFR 302.4)

Cobalt (CAS 7440-48-4)	LISTED
Copper (CAS 7440-50-8)	LISTED
Manganese (CAS 7439-96-5)	LISTED
Nickel (CAS 7440-02-0)	LISTED

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Hazard categories

Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Copper	7440-50-8	71-90
Aluminum	7429-90-5	7-16
Manganese	7439-96-5	0-14
Nickel	7440-02-0	0-6
Cobalt	7440-48-4	0-3

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Cobalt (CAS 7440-48-4)  
Manganese (CAS 7439-96-5)  
Nickel (CAS 7440-02-0)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.**

**Safe Drinking Water Act (SDWA)** Not regulated.

### US state regulations

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

#### US. Massachusetts RTK - Substance List

Aluminum (CAS 7429-90-5)  
Cobalt (CAS 7440-48-4)  
Copper (CAS 7440-50-8)  
Manganese (CAS 7439-96-5)  
Nickel (CAS 7440-02-0)  
Silicon (CAS 7440-21-3)  
Tin (CAS 7440-31-5)

#### US. New Jersey Worker and Community Right-to-Know Act

Aluminum (CAS 7429-90-5)  
Copper (CAS 7440-50-8)  
Manganese (CAS 7439-96-5)  
Nickel (CAS 7440-02-0)  
Silicon (CAS 7440-21-3)  
Tin (CAS 7440-31-5)

#### US. Pennsylvania Worker and Community Right-to-Know Law

Aluminum (CAS 7429-90-5)  
Cobalt (CAS 7440-48-4)  
Copper (CAS 7440-50-8)  
Manganese (CAS 7439-96-5)  
Nickel (CAS 7440-02-0)  
Silicon (CAS 7440-21-3)  
Tin (CAS 7440-31-5)

**US. Rhode Island RTK**

Aluminum (CAS 7429-90-5)  
Cobalt (CAS 7440-48-4)  
Copper (CAS 7440-50-8)  
Manganese (CAS 7439-96-5)  
Nickel (CAS 7440-02-0)

**US. California Proposition 65**

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Cobalt (CAS 7440-48-4)  
Nickel (CAS 7440-02-0)

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date 9/14/21

Version # 01

NFPA ratings



References

HSDB® - Hazardous Substances Data Bank  
IARC Monographs. Overall Evaluation of Carcinogenicity  
National Toxicology Program (NTP) Report on Carcinogens  
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

The information in this SDS was obtained from industry sources that we believe to be reliable. However, the information is provided without any representation or warranty, expressed or implied regarding the accuracy or correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.