COPPER ARSENATE
SAFETY DATA SHEET

Teck

SECTION 1. IDENTIFICATION

Product Identity: Copper Arsenate

Trade Names and Synonyms: Copper orthoarsenate; Copper arsenate hydrate; Sodium copper arsenate; Arsenic acid, Copper sodium salt.

Manufacturer:
Teck Metals Ltd.
Trail Operations
25 Aldridge Ave
Trail, British Columbia
V1R 4L8
Emergency Telephone: 250-364-4214

Supplier:
Teck Metals Ltd.
Trail Operations
Trail, British Columbia
V1R 4L8

Preparer:
Teck Metals Ltd.
Suite 3300 – 550 Burrard Street
Vancouver, British Columbia
V6C 0B3

Date of Last Revision: 31 March 2023.

Date of Last Edit: April 10, 2023

Product Use: This material is a feed stock for the production of wood treatment chemicals.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulation SOR/2015-17 and the SDS contains all the information required by both the HPR and the OSHA Hazard Communication Standard of 22012 (29 CFR 1910.1200(g) and Appendix D)

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION:

Health		Physical	Environmental
Acute Toxicity (Oral/Inhalation)	– Does not meet criteria	Does not meet criteria for any Physical Hazard	**Aquatic Toxicity – Long Term - (Chronic) Category 4**
Skin Corrosion/Irritation	– Does not meet criteria		
Eye Damage/Eye Irritation	**– Category 2**		
Respiratory or Skin Sensitization	– Does not meet criteria		
Mutagenicity	– Does not meet criteria		
Carcinogenicity	**- Category 1A**		
Reproductive Toxicity	**– Category 2 plus Lactation**		
Specific Target Organ Toxicity			
Acute Exposure	**– Category 2**		
Chronic Exposure	**– Category 1**		

LABEL:

Symbols: 	**Signal Word:** **DANGER**
Hazard Statements **DANGER!** Causes eye irritation. May cause cancer. Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children. Causes damage to nerves, respiratory tract, liver, kidneys and skin through prolonged or repeated exposure. May cause long lasting harmful effects to aquatic life.	**Precautionary Statements:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes. Avoid contact during pregnancy/while nursing. Use personal protective equipment as required. Do not eat, drink or smoke while using this product. Wash hands thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Avoid release to the environment. Dispose of contents/container in accordance with local regulations.

Emergency Overview: A turquoise blue powder that does not burn or readily decompose in a fire situation. Copper arsenate dust particles may cause eye, skin and respiratory irritation. Inhalation or ingestion of dust or fumes may produce both acute and chronic health effects. In a fire situation freshly-formed fume may be an intense pulmonary irritant and may result in development of pulmonary edema several hours after exposure. Arsenic and cadmium compounds are a cancer hazard and a potential reproductive toxin. Contact with acid or alkaline solutions under reducing conditions (e.g., in the presence of zinc or galvanized steel) may generate highly toxic arsine gas. Such circumstances should be regarded as being immediately life threatening. SCBA and full protective clothing are required for fire emergency response personnel.

Potential Health Effects: Copper arsenate dust may be irritating to the eyes, skin and respiratory passages. Inhalation or ingestion of dust may result in dryness and irritation of the nose and throat, metallic taste, headache, nausea, vomiting, diarrhea, abdominal pain, muscle spasms, weight loss and anemia. Prolonged exposure may also cause central and peripheral nervous system damage, liver and kidney dysfunction, cardiovascular and gastrointestinal disturbances, skin rashes and dermatitis. Due to the presence of arsenic and cadmium, which are classified as known human carcinogens by various regulatory and advisory bodies, this product is considered carcinogenic. It may also be a reproductive toxin (see Toxicological Information, Section 11).

Potential Environmental Effects: This product is known to have low water solubility and therefore its constituents have limited bioavailability. However, it can be hazardous in aquatic and terrestrial environments; low concentrations of copper and cadmium can be potentially toxic to fish, and elevated concentrations of the arsenic from the product in soils can lead to increased bioaccumulation and can therefore be detrimental to terrestrial plants and invertebrates (see Ecological Information, Section 12).

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS Registry No.	CONCENTRATION (% wt./wt.)
Copper Arsenate	146504-31-6	98.7 – 99.7%
Cadmium Compounds	N/A	0.3 – 1.3%

Note: See Section 8 for Occupational Exposure Guidelines.

SECTION 4. FIRST AID MEASURES

Eye Contact: *Symptoms:* Eye irritation, redness. Quickly and gently blot or brush chemical off face. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 – 20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation in order to attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately obtain medical attention.

Skin Contact: *Symptoms:* Skin soiling, possible mild irritation. Remove contaminated clothing, shoes and leather goods (e.g., watchbands, belts). Quickly and gently blot or brush away excess chemical. Wash gently and thoroughly with lukewarm gently flowing water and non-abrasive soap for 5 minutes. If irritation persists, repeat flushing. Obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or else discard.

Inhalation: *Symptoms:* Possible upper respiratory irritation of nose and/or throat. Remove source of contamination or move victim from exposure area to fresh air immediately. If breathing has stopped, trained personnel should begin artificial respiration. If the heart has stopped, immediately start cardiopulmonary resuscitation (CPR), or automated external defibrillation (AED). Quickly transport victim to an emergency care facility.

Ingestion: *Symptoms:* Stomach upset. Never give anything by mouth if victim is rapidly losing consciousness or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 2 – 8 oz. (60 – 240 ml) of water. If vomiting occurs naturally, have victim rinse mouth with water again. Obtain medical advice and bring a copy of this SDS.

SECTION 5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards: This product is not considered a fire or explosion hazard.

Extinguishing Media: Use any means of extinction appropriate for surrounding fire conditions such as water spray, carbon dioxide, dry chemical, or foam.

Fire Fighting: Highly toxic cadmium oxide fumes may evolve in fires. Fire fighters must be fully trained and wear full protective clothing including an approved, self-contained breathing apparatus which supplies a positive air pressure within a full face piece mask. If possible, move material from fire area and cool material exposed to flame. Do not allow run-off to enter sewers or watercourses.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Procedures for Cleanup: Control source of spillage if possible to do so safely. Restrict access to the area until completion of clean up. Clean up spilled material immediately, observing precautions in Section 8, Personal Protection and using methods which will minimize dust generation (e.g., vacuum solids, dampen material and shovel or wet sweep). Return uncontaminated spilled material to the process if possible. Place contaminated material in suitable labeled containers for recovery or disposal. Treat or dispose of waste material in accordance with all local, regional, and national requirements.

Personal Precautions: Persons responding to an accidental release should wear protective clothing, gloves and a respirator (see also Section 8). Close-fitting safety goggles may be necessary in some circumstances to prevent eye contact with dust. Workers should wash and change clothing following cleanup of a spill to prevent personal contamination with copper arsenate dust.

Environmental Precautions: This product may pose a threat to the environment. Contamination of soil and water should be prevented. Do not allow spillage or run-off to enter storm drains, sewers or watercourses.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid exposure to incompatible materials such as acids or alkalis and galvanized (zinc) surfaces. Keep container tightly closed. Minimize dust generation and accumulation. Avoid breathing dust.

Conditions for Safe Storage: Store containers in a dry, cool, well-ventilated area, separate from strong acids, other incompatible materials, active metals and foods or feedstuffs.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Guidelines: *(Time-Weighted Average (TWA) concentrations over 8 hours unless otherwise indicated)*

Component	ACGIH TLV	OSHA PEL	NIOSH REL
Copper Arsenate	*see note below*	*see note below*	*see note below*
Cadmium Compounds	0.01 mg/m^3 (Total Cd) 0.002 mg/m^3 (Respirable Cd)	*0.005 mg/m^3 PEL* *0.015 or 0.05 mg/m^3 ‡ SECAL*	*Lowest Feasible Level*

NOTE: OEGs for individual jurisdictions may differ from those given above. Check with local authorities for the applicable OEGs in your jurisdiction. ACGIH - American Conference of Governmental Industrial Hygienists; OSHA - Occupational Safety and Health Administration; NIOSH - National Institute for Occupational Safety and Health. TLV – Threshold Limit Value, PEL – Permissible Exposure Limit, REL – Recommended Exposure Limit, SECAL – Separate Engineering Control Airborne Limit.

NOTE: The OSHA PEL and ACGIH TLV for inorganic arsenic compounds are both 0.01 mg/m3. The NIOSH REL is 0.002 mg/m3 as a 15 minute ceiling limit. The OSHA PEL, the ACGIH TLV and NIOSH REL for copper dust and mist are 1.0 mg/m3. For copper fume the OSHA TLV and NIOSH REL are 0.1 mg/m3 and the ACGIH TLV is 0.2 mg/m3. Based on the composition of this product, the airborne arsenic concentration would be the controlling factor in maintaining copper, arsenic and cadmium concentrations below their respective OELs.

‡ Separate Engineering Control Airborne Limits (SECALs): to be achieved in specified processes and workplaces where it is not possible to achieve the PEL through engineering and work practices alone. The OSHA SECAL for cadmium is 0.015 or 0.050 mg/m3, depending on the processes involved. See Table 1 of 29 CFR 1910.1027.

NOTE: The selection of the necessary level of engineering controls and personal protective equipment will vary depending upon the conditions of use and the potential for exposure. The following are therefore only general guidelines that may not fit all circumstances. Control measures to consider include:

Ventilation: Use adequate local or general ventilation to maintain the concentration of copper arsenate in the working environment well below recommended occupational exposure limits, especially when fumes are generated. Supply sufficient replacement air to make up for air removed by the exhaust system. Use process enclosure, local exhaust ventilation, moist rather than dry handling techniques or other engineering controls to minimize airborne dust generation.

Protective Clothing: Coveralls or other work clothing and gloves are recommended to prevent prolonged or repeated direct skin contact. Close-fitting safety goggles should be worn to prevent eye contact if excessive dust is generated or where any possibility exists that eye contact may occur. Workers should wash immediately when skin becomes contaminated and at the end of each work shift. Work clothing should be removed immediately if it becomes heavily contaminated and should be changed daily if there is reasonable probability that the clothing may be contaminated. Inform laundry personnel of contaminant's hazards.

Respirators: Where copper arsenate dust is generated and cannot be controlled to within acceptable levels by engineering means, use appropriate NIOSH-approved respiratory protection equipment (a 42CFR84 Class N, R or P-100 particulate filter cartridge). All cutting and burning of copper arsenate contaminated surfaces should be done under local exhaust ventilation or else with appropriate respiratory protection (an assigned protection factor of at least 1,000 recommended). When exposure levels are unknown, a self-contained breathing apparatus which supplies a positive air pressure within a full face piece mask should be worn.

General Hygiene Considerations: Always practice good personal hygiene. Refrain from eating, drinking, or smoking in work areas. Thoroughly wash hands before eating, drinking, or smoking in appropriate, designated areas as well as at the end of the workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Turquoise blue powder	**Odour:** None	**Odour Threshold:** None	**pH:** 6.4 (saturated solution)
Vapour Pressure: $<10^{-5}$ Pa @ 50°C	**Vapour Density:** Not Applicable	**Boiling Point/Range:** No Data	**Melting Point/Range:** >300°C
Relative Density (Water = 1)**:** 3.1	**Evaporation Rate:** Not Applicable	**Coefficient of Water/Oil Distribution:** No Data	**Solubility (in water):** Very slightly soluble
Flammability: Non-combustible solid	**Flammable Limits (LEL/UEL):** Not Applicable	**Auto-ignition Temperature:** Not Applicable	**Decomposition Temperature:** No Data
Molecular Formula: $Cu_5NaH(AsO_4)_4 \bullet 5H_2O$	**Molecular Weight:** 987.5	**Particle Size:** 24 µm	

NOTE: Flash point and viscosity are not relevant properties of this product and therefore have not been included above.

SECTION 10. STABILITY AND REACTIVITY

Stability & Reactivity: Copper arsenate is stable and not considered reactive under normal temperatures and pressures. Hazardous polymerization or runaway reactions will not occur.

Incompatibilities: Contact with acids in the presence of active metals such as zinc or galvanized steel may form nascent hydrogen and possibly result in the generation of highly toxic arsine gas.

Hazardous Decomposition Products: High temperature operations such as oxy-acetylene cutting or electric arc welding on dust-contaminated surfaces will generate highly toxic arsenic and cadmium oxide fumes. Freshly-formed cadmium fume is an intense pulmonary irritant and may result in development of pulmonary edema several hours after exposure.

SECTION 11. TOXICOLOGICAL INFORMATION

General: NOTE: There is very limited available data on the health effects of this product. Therefore, much of the information provided in this MSDS is based on analogy with other copper, arsenic and cadmium compounds for which more extensive health hazard data and industrial experience is available. The primary routes of exposure to copper arsenate are by inhalation or ingestion of dust. Individuals with “Wilson’s Disease” are predisposed to accumulate copper in their body and should not be occupationally exposed without careful periodic medical monitoring. Individuals with pre-existing lung, liver, kidney, and blood ailments should be precluded from exposure until approved by a physician.

Acute:

Skin/Eye: Contact with copper arsenate may cause local irritation of skin and eyes, including redness and pain in the eyes. Dermatitis may also be experienced by some individuals.

Inhalation: Copper arsenate dust may be irritating to the nose, throat and upper respiratory tract with symptoms of sneezing, cough, dryness of the mouth and throat, metallic taste and headache. Severe over-exposure may cause shortness of breath, stomach pains, muscle spasms, vertigo, delirium and coma. **Arsine gas may be generated when arsenic-containing compounds are in contact with acid solutions and an active metal such as zinc or galvanized steel. Exposure to arsine gas should be regarded as potentially life threatening.** Fumes from cutting or burning of copper arsenate-contaminated surfaces will contain oxides of copper, arsenic and cadmium. They may cause systemic poisoning and possible permanent damage to the lungs. Early symptoms of excessive exposure include dryness of the throat; irritation of the nose, throat, and respiratory tract; headache; coughing; and a metallic taste. In the most severe cases, after a delay of several hours (up to 10 hours) a person may develop constriction of the chest, persistent cough, and progressive shortness of breath. There may be headache, chills, diarrhea, muscle aches, nausea, vomiting, irritability, and restlessness. Pulmonary congestion may progress rapidly causing wheezing and symptoms of oxygen deficiency. Death may follow. Milder cases of acute exposure may produce symptoms resembling metal fume fever with some symptoms and signs of acute gastroenteritis as well.

Ingestion: Ingestion of arsenic compounds can cause nausea and gastrointestinal upset, abdominal pain, vomiting, diarrhea, muscle spasms and, in severe cases, can cause delirium, vertigo, acute kidney failure, cardiopulmonary depression and coma.

Chronic:
Prolonged exposure to copper arsenate dust may produce many of the symptoms of short term exposure and may also cause anemia, weight loss, central and peripheral nervous system damage, gastrointestinal and cardiovascular disturbances, skin rashes and dermatitis. Inhalation of copper and arsenic compounds has occasionally caused ulceration and perforation of the nasal septum. The primary target organ for chronic cadmium effects is the kidney with increased excretion of a specific low molecular weight protein (beta-2-microglobulin). Damage to the lungs (of the emphysematous type) has been reported in some studies of cadmium-exposed workers but not found in other studies. Cigarette tobacco contains cadmium and smoking therefore adds to the daily intake of cadmium which may increase the risk of cumulative toxic effects. Clinical evidence of the cumulative effects of cadmium may appear after exposure has ceased. Disease may then be progressive. Arsenic and inorganic arsenic compounds are listed as an A1 Carcinogen (Confirmed Human Carcinogen) by the ACGIH and as a Group 1 Carcinogen (Carcinogenic to Humans) by IARC. The NTP and OSHA also identify arsenic and inorganic arsenic compounds as Known Human Carcinogens. The IARC has classified cadmium and certain cadmium compounds as Group 1, Carcinogenic to Humans. The ACGIH classifies cadmium as a Suspected Human Carcinogen (A2). The NTP classifies cadmium as a Known Human Carcinogen and OSHA lists cadmium as a Carcinogen. Copper is not identified as having carcinogenic potential by any of these regulatory or advisory bodies. Both inorganic arsenic compounds and cadmium compounds have been identified as possible reproductive toxins as well.

Animal Toxicity:

Hazardous Ingredient:	Acute Oral Toxicity:	Acute Dermal Toxicity:	Acute Inhalation Toxicity:
Copper Arsenate	2,147 mg/kg†	No data	No data
Cadmium Compounds	No data	No data	No data

† LD_{50}, Rat, Oral, * LD_{50}, Rat, Dermal ‡ LC_{50}, Rat, Inhalation, 4 hour
† NOTE: this acute oral toxicity has been determined experimentally using an actual sample of this specific product from Teck's production facility.

SECTION 12. ECOLOGICAL INFORMATION

This product is known to have low water solubility and therefore its constituents have limited bioavailability. However, when present in their soluble forms, copper and cadmium, at relatively low concentrations, can be acutely toxic to fish and other aquatic life forms. In addition, arsenic is known to bioconcentrate in plants and aquatic organisms, which may lead to ecotoxicity to higher life forms. Copper in soil can also be toxic to plants and soil invertebrates at elevated concentrations.

High soil acidity (pH) favors the release of cadmium ions and, as a result, the uptake of cadmium by plants. Cadmium is strongly accumulated by most organisms through food and water. Cadmium bioaccumulation in aquatic organisms is greatest in invertebrates, followed by fish and then by aquatic plants. Bioaccumulation in terrestrial plants can, in turn, lead to elevated concentrations of cadmium in animals that feed on these plants.

SECTION 13. DISPOSAL CONSIDERATIONS

Do not wash down drain or allow material to reach natural watercourses. If material cannot be returned to process or salvage, dispose of only in accordance with applicable regulations. Any waste material would most likely meet the definition of a hazardous waste in most jurisdictions. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated in order to determine the proper waste classification and disposal methods.

SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME	Environmentally Hazardous Substance, Solid, n.o.s., RQ (contains arsenic)
HAZARD CLASSIFICATION	Class 9, Packing Group III
PRODUCT IDENTIFICATION NUMBER	UN3077
MARINE POLLUTANT	Yes
IMO CLASSIFICATION	Class 9, Packing Group III

SECTION 15. REGULATORY INFORMATION

INGREDIENTS LISTED ON TSCA INVENTORY..... Yes

HAZARDOUS UNDER HAZARD COMMUNICATION STANDARD..... Yes

CERCLA SECTION 103 HAZARDOUS SUBSTANCES ...
- Arsenic Compounds.....Yes ... Reportable Quantity: None Assigned
  Arsenic RQ: 1lb.
- Copper Compounds.....Yes ... Reportable Quantity: None Assigned
  Copper RQ: 5,000lb.
- Cadmium Compounds ...Yes ... Reportable Quantity: None Assigned
  Cadmium RQ: 10lb.

EPCRA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE ..... No

EPCRA SECTION 311/312 HAZARD CATEGORIES ..... Delayed (Chronic) Health Hazard - Carcinogen
Delayed (Chronic) Health Hazard – Target Organ Effects (Kidney)

EPCRA SECTION 313 TOXIC RELEASE INVENTORY:..
- Arsenic Compounds (Copper Arsenate) CAS No. 146504-31-6
  Percent by Weight .....98.7 - 99.7

- Cadmium Compounds CAS No. N/A
  Percent by Weight.....0.3 – 1.3

SECTION 16. OTHER INFORMATION

Date of Original Issue: May 5, 1998 **Version:** 01

Date of Latest Revision: March 31, 2023 **Version:** 19

The information in this Safety Data Sheet is based on the following references:

- American Conference of Governmental Industrial Hygienists, 2004, Documentation of the Threshold Limit Values and Biological Exposure Indices, 7th Edition, plus updates.
- American Conference of Governmental Industrial Hygienists, 2022, Guide to Occupational Exposure Values.
- American Conference of Governmental Industrial Hygienists, 2022, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.
- American Conference of Governmental Industrial Hygienists (ACGIH) - Documentation of the TLV® - Arsenic and Its Inorganic Compounds.
- Arsenic & inorganic arsenic compounds - Health-based calculated occupational cancer risk values - Health Council of the Netherlands – 2012.
- Arsenic Hazards to Fish, Wildlife and Invertebrates: A Synoptic Review - Ronald Eisler, U S Fish & Wildlife Service Report 85 (1.12) January 1988.
- Australian National Industrial Chemicals Notification & Assessment Scheme (NICNAS) - Human Health Tier II Assessment for Trivalent Arsenites.
- Bretherick's Handbook of Reactive Chemical Hazards, 20th Anniversary Edition (P. G. Urben, Ed.) 1995.
- Cadmium and its compounds - Evaluation of the effects on reproduction, recommendation for classification - Health Council of the Netherlands -2000.
- Canadian Centre for Occupational Health and Safety (CCOHS), Hamilton, ON, CHEMINFO Record No. 3454 ¬ Cadmium.
- European Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, amending and repealing directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (REACH).
- Health Canada, SOR/2015-17, Hazardous Products Regulations, 11 February 2015.
- International Chemical Safety Cards (WHO/IPCS/ILO), ICSC:0020 – Cadmium.
- International Chemical Safety Cards (WHO/IPCS/ILO), ICSC:0648 – Copper (II) Orthoarsenate.
- Merck & Co., Inc., 2001, The Merck Index, An Encyclopedia of Chemicals, Drugs, and Biologicals, Thirteenth Edition.
- National Institute of Health - HazMap web site - Arsenic Acid, Copper Salt (www.hazmap.nlm.nih.gov/index - accessed 29 Dec 2014).

- National Institute of Technology and Evaluation (NITE) - GHS Classification Guidance by the Japanese Government - Copper Arsenate (Revised 2008).National Library of Medicine, National Toxicology Information Program, 1997, Hazardous Substance Data Bank.
- Patty's Toxicology, 5th Edition, (E Bingham, B Cohrssen & C H Powell, Ed.) 2001.
- Recognition and Management of Pesticide Poisoning, 5th edition, U.S. EPA, Chapter 14, page 129.
- U.S. Dept. of Health and Human Services, National Institute for Occupational Safety and Health, NIOSH Pocket Guide to Chemical Hazards. CD-ROM Edition, September 2005.
- U.S. Dept. of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, Toxicological Profile for Cadmium (Draft) Sept 2008.
- U.S. Occupational Safety and Health Administration, 1989, Code of Federal Regulations, Title 29, Part 1910.100 & 1910.1200

Acronyms not spelled out elsewhere in the SDS:

CAS: Chemical Abstracts Service
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
DOT: Department of Transportation
EPCRA: Emergency Planning and Community Right- to-Know Act
IMO: International Maritime Organization
LD50, LC50: Lethal Dose 50%, Lethal Concentration 50%
OEGs: Occupational Exposure Guidelines
TSCA: Toxic Substances Control Act
Wt.: Weight

Notice to Reader

Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. Teck Metals Ltd. extends no warranty and assumes no responsibility for the accuracy of the content and expressly disclaims all liability for reliance thereon. This safety data sheet provides guidelines for the safe handling and processing of this product; it does not and cannot advise on all possible situations. Therefore, your specific use of this product should be evaluated to determine if additional precautions are required. Individuals exposed to this product should read and understand this information and be provided pertinent training prior to working with this product.