

# SAFETY DATA SHEET



Revision date: 26-Aug-2020

Revision Number 3

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** COPPER ARSENIC 70/30

**Product Code(s)** 000000050416

### Other means of identification

**UN number** 3077

**Synonyms** Copper-arsenic master alloy; Copper-arsenic 70/30; Copper arsenic 30% CuAs30.

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

**Recommended use** Production of alloys.

**Uses advised against** No information available.

### Details of the supplier of the safety data sheet

#### Supplier

Ixom Operations Pty Ltd (Incorporated in Australia)  
NZBN: 9429041465226 Address: 166 Totara Street  
Mt Maunganui South  
New Zealand

Telephone Number: +64 9 368 2700

Facimile: +64 9 368 2710

### For further information, please contact

**Contact Point** Product Safety Department

### Emergency telephone number

**Emergency Telephone** 0 800 734 607 (ALL HOURS)

## 2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

### GHS Classification

#### **SIGNAL WORD**

Danger

<b>Acute toxicity - Oral</b>	Category 4
<b>Acute toxicity - Inhalation (Dusts/Mists)</b>	Category 4
<b>Serious eye damage/eye irritation</b>	Category 2

Skin sensitization	Category 1
Germ cell mutagenicity	Category 1A
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1
New Zealand Soil toxicity	HSNO - 9.2D
New Zealand Terrestrial vertebrates	HSNO - 9.3C

#### Label elements



#### Hazard statements

H302 - Harmful if swallowed  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H340 - May cause genetic defects  
H350 - May cause cancer  
H372 - Causes damage to organs through prolonged or repeated exposure  
H410 - Very toxic to aquatic life with long lasting effects  
H423 - Harmful to the soil environment  
H433 - Harmful to terrestrial vertebrates

#### Precautionary Statements - Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Do not breathe fume, gas, mist, vapours, spray  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves / protective clothing / eye protection / face protection  
Use personal protective equipment as required  
Avoid release to the environment

#### Precautionary Statements - Response

Specific treatment (see First aid on this SDS)  
IF exposed or concerned: Get medical advice/attention  
Get medical advice/attention if you feel unwell  
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 ON SKIN: Wash with plenty of soap and water  
If skin irritation or rash occurs: Get medical advice/attention  
Wash contaminated clothing before reuse  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth  
Collect spillage

#### Precautionary Statements - Storage

Store locked up

#### Precautionary Statements - Disposal

In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

**Other hazards which do not result in classification**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture**

Chemical name	CAS No.	Weight-%
Copper	7440-50-8	70%
Arsenic	7440-38-2	30%

### 4. FIRST AID MEASURES

**Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Emergency telephone number</b>	Poisons Information Center, New Zealand: 0800 764 766 Poisons Information Center, Australia: 13 11 26
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media**

**Suitable Extinguishing Media** Dry chemical.

**Unsuitable extinguishing media** Water.

**Specific hazards arising from the chemical**

**Specific hazards arising from the** Non-combustible.

chemical

**Special protective actions for fire-fighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Hazchem code** 2Z

## 6. ACCIDENTAL RELEASE MEASURES

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

**Personal precautions** Do not breathe dust. Avoid contact with skin, eyes, and clothing. Avoid generation of dust. Do not touch or walk through spilled material. Ensure adequate ventilation. Evacuate personnel to safe areas. Use personal protective equipment as required. Wash thoroughly after handling.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

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

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

**Methods for cleaning up** Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust.

**Precautions to prevent secondary hazards**

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Do not breathe dust. Avoid contact with skin, eyes, and clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Use personal protection equipment. Wash thoroughly after handling.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from water or moist air. Keep container closed when not in use.

**Incompatible materials** Strong acids. Acid chlorides. Halogens.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Limits** No value assigned for this specific material by the New Zealand Workplace Health & Safety

Authority. However, Workplace Exposure Standard(s) for constituent(s):

Chemical name	New Zealand	ACGIH
Arsenic 7440-38-2	35 µg/L urine end of work week sum of inorganic Arsenic and its methylated metabolites	35 µg As/L

Arsenic & soluble compounds, as As: WES-TWA 0.05 mg/m<sup>3</sup>, 6.7A Known or presumed human carcinogen  
 Arsenic - Biological Exposure Index: 100 ug/L  
 Copper dusts & mists, as Cu: WES-TWA 1 mg/m<sup>3</sup>  
 Copper fume: WES-TWA 0.2 mg/m<sup>3</sup>

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Appropriate engineering controls**

**Engineering controls**

Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

**Individual protection measures, such as personal protective equipment**

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



**Eye/face protection**

Goggles.

**Hand protection**

Impervious gloves.

**Skin and body protection**

Boots. Wear suitable protective clothing. Overalls.

**Respiratory protection**

If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Environmental exposure controls**

No information available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties

Physical state	Broken waffle plates
Appearance	No information available.
Color	Red - Brown
Odor	Odourless
Odor threshold	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	None known
Melting point / freezing point	830°C	None known
Boiling point / boiling range	No data available	None known
Flash point	Not applicable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	7.80	None known
Water solubility	Insoluble in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information**10. STABILITY AND REACTIVITY**Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions Hydrogen gas can react with inorganic arsenic to form the highly toxic arsine gas.

Conditions to avoid

Conditions to avoid Exposure to air. Moisture.

**Incompatible materials****Incompatible materials** Strong acids. Acid chlorides. Halogens.**Hazardous decomposition products****Hazardous decomposition products** Metal oxides.**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Information on likely routes of exposure****Product Information**

No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation**

Inhalation of dust in high concentration may cause irritation of respiratory system. Breathing in fumes from heating may produce symptoms of 'metal fume fever'. This condition is characterised by influenza type symptoms occurring a few hours after exposure and lasting up to 48 hours. Symptoms may include chills, fever, headache, tightness of the chest, coughing, weakness, dryness of nose and mouth, muscular pain, nausea, and vomiting.

**Eye contact**

Causes serious eye irritation.

**Skin contact**

May cause irritation. May cause sensitization by skin contact. (based on components).

**Ingestion**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Symptoms**

No information available.

**Acute toxicity****Numerical measures of toxicity**

No information available.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Arsenic	= 763 mg/kg ( Rat )	-	-

*See section 16 for terms and abbreviations***Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation**

Not classified. Classification is based on mixture calculation methods based on component data.

**Serious eye damage/eye irritation**

Causes serious eye irritation. Classification is based on mixture calculation methods based on component data.

**Respiratory or skin sensitization**

May cause sensitization by skin contact. Classification is based on mixture calculation methods based on component data.

**Germ cell mutagenicity**

May cause genetic defects.

**Carcinogenicity**

May cause cancer.

Chemical name	New Zealand	IARC

Arsenic - 7440-38-2	Confirmed carcinogen	Group 1
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<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	No information available.
<b>Chronic effects:</b>	Prolonged and repeated exposure may cause disturbances of the digestive system such as loss of appetite, cramps, nausea, constipation or diarrhoea as well as disturbances of the blood, liver, kidneys, and nervous system. Arsenic is carcinogenic to humans in inhalable form.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity** Keep out of waterways. Very toxic to aquatic life with long lasting effects.

**Terrestrial ecotoxicity** There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Copper	EC50: 0.0426 - 0.0535mg/L (72h, Pseudokirchneriella subcapitata) EC50: 0.031 - 0.054mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 0.0068 - 0.0156mg/L (96h, Pimephales promelas) LC50: =1.25mg/L (96h, Lepomis macrochirus) LC50: =0.3mg/L (96h, Cyprinus carpio) LC50: =0.8mg/L (96h, Cyprinus carpio) LC50: =0.112mg/L (96h, Poecilia reticulata) LC50: <0.3mg/L (96h, Pimephales promelas) LC50: =0.2mg/L (96h, Pimephales promelas) LC50: =0.052mg/L (96h, Oncorhynchus mykiss)	EC50: =0.03mg/L (48h, Daphnia magna)

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

### Other adverse effects

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste from residues/unused** Dispose of product in packaging in a way that is consistent with the Hazardous Substances



<b>products</b>	(Disposal) Notice 2017 and the Act. Treat the substance using a method that changes the characteristics or composition of the substance so that the substance is no longer a hazardous substance; or export the substance from New Zealand as waste.
<b>Contaminated packaging</b>	For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

## 14. TRANSPORT INFORMATION

<b><u>ROAD AND RAIL TRANSPORT</u></b>	Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.
<b>UN number</b>	3077
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS COPPER)
<b>Hazard class</b>	9
<b>Packing group</b>	III
<b>Hazchem code</b>	2Z
<b><u>IATA</u></b>	Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.
<b>UN number</b>	3077
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS COPPER)
<b>Transport hazard class(es)</b>	9
<b>Packing group</b>	III
<b><u>IMDG</u></b>	Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.
<b>UN number</b>	3077
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS COPPER)
<b>Subsidiary hazard class</b>	9
<b>Packing group</b>	III
<b>IMDG EMS Fire</b>	F-A
<b>IMDG EMS Spill</b>	S-F
<b>Marine pollutant</b>	Yes

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### New Zealand

**National regulations** See section 8 for national exposure control parameters

Chemical name	New Zealand HSNO Chemical Classification
Copper - 7440-50-8	6.1B (All),6.1B (I),6.1B (O),6.4A,6.5B,6.6A,6.9B (All),6.9B (I),6.9B (O),9.1A (All),9.1A (A),9.1A (C),9.1A (F),9.1A (Oth),9.2D,9.3A

Arsenic - 7440-38-2	6.1B (All),6.1B (I),6.1B (O),6.6B,6.7A,6.9A (All),6.9A (I),6.9A (O),9.1A (All),9.1A (A),9.1A (C),9.1B (F),9.3A
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**International Inventories**

<b>NZIoC</b>	All the constituents of this material are listed on the New Zealand Inventory of Chemicals.
<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AICS</b>	Contact supplier for inventory compliance status.

**Legend:**

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

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**16. OTHER INFORMATION**

Supplier Safety Data Sheet 09/ 2018

**Prepared By**

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Issuing Date:**

26-Aug-2020

**Reason(s) For Issue:**

5 Yearly Revised Primary SDS  
Change to Transport Information  
Change from non-DG to DG

**Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**End of Safety Data Sheet**