

# SAFETY DATA SHEET



Revision date: 23-Feb-2021

Revision Number 5

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** COPPER GLUCONATE

**Product Code(s)** 000000033223

### Other means of identification

**Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER GLUCONATE)

**UN number** 3077

**CAS No.** 527-09-3

**Chemical name** Copper, bis(D-gluconato)-

**Synonyms** Copper Gluconate 13%; Copper Gluconate (13% Copper)

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

**Recommended use** Pharmaceutical

**Uses advised against** No information available.

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

#### **Supplier**

Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia  
Street Address: 166 Totara Street  
Mt Maunganui South  
New Zealand

Telephone Number: +64 9 309 2528

Facsimile: +64 9 0508 366 364

### 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**

Warning

EPA New Zealand HSNO approval code or group standard HSR003969

Acute toxicity - Oral	Category 4 (HSNO - 6.1D)
Specific target organ toxicity (repeated exposure)	Category 2 (HSNO - 6.9B)
Acute aquatic toxicity	Category 1 (HSNO - 9.1A)
New Zealand Terrestrial vertebrates	HSNO - 9.3B

**Label elements****Hazard statements**

H302 - Harmful if swallowed

H373 - May cause damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H432 - Toxic to terrestrial vertebrates

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe fume, gas, mist, vapours, spray

Avoid release to the environment

**Precautionary Statements - Response**

Get medical advice/attention if you feel unwell

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Collect spillage

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

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

Dust can form an explosive mixture with air

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance**

Chemical name	CAS No.	Weight-%
Copper gluconate	527-09-3	100

**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. Call a physician if symptoms occur.
<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. Call a physician if symptoms occur.
<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. Call a physician.

**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, CO<sub>2</sub>, water spray or regular foam.

**Unsuitable extinguishing media** Do not use straight streams.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Combustible material. Dust can form an explosive mixture with air. Environmentally hazardous. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**Hazardous combustion products** Carbon oxides. Copper compounds.

**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** Avoid contact with skin and eyes. Avoid breathing dust or spray mist. Avoid generation of dust. Ensure adequate ventilation. Do not touch or walk through spilled material. Remove all sources of ignition. Take precautionary measures against static discharges. Evacuate personnel to safe areas. Use personal protective equipment as required. Wash thoroughly after handling.

**Other information** Refer to protective measures listed in Sections 7 and 8.

---

<b>For emergency responders</b>	Use personal protection recommended in Section 8.
<b><u>Environmental precautions</u></b>	
<b>Environmental precautions</b>	See Section 12 for additional Ecological Information. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
<b><u>Methods and material for containment and cleaning up</u></b>	
<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so. Do not touch or walk through spilled material. Keep out of drains, sewers, ditches and waterways.
<b>Methods for cleaning up</b>	Take precautionary measures against static discharges. Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust.
<b><u>Precautions to prevent secondary hazards</u></b>	
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid breathing dust or spray mist. Do not eat, drink or smoke when using this product. Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Avoid generation of dust. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof. Take precautionary measures against static discharges.
<b>General hygiene considerations</b>	Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. Keep out of the reach of children. Store away from sources of heat or ignition.
<b>Incompatible materials</b>	Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

<b>Exposure Limits</b>	No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituent(s):
------------------------	--

Copper fume: WES-TWA 0.2 mg/m<sup>3</sup>

Copper and its inorganic compounds, as Cu: WES-TWA 0.01 mg/m<sup>3</sup>, dsen  
Particulates not otherwise classified: 8hr WES-TWA 10 mg/m<sup>3</sup> (inhalable dust) or 3 mg/m<sup>3</sup> (respirable dust)

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.

(dsen) - Dermal sensitiser.

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, SAFETY GLASSES, GLOVES, DUST MASK.



#### **Eye/face protection**

Glasses.

#### **Hand protection**

Impervious gloves.

#### **Skin and body protection**

Wear suitable protective clothing. Antistatic boots. 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

<b>Physical state</b>	Powder
<b>Appearance</b>	No information available.
<b>Color</b>	light blue
<b>Odor</b>	No information available.
<b>Odor threshold</b>	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	4.5	10 g/l @ 20 °C
Melting point / freezing point	155 - 157 °C	
Boiling point / boiling range	No data available	None known
Flash point	No data available	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	No data available	None known
Water solubility	400-500 g/l @ 20 °C	
Solubility(ies)	Soluble in water	
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 Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Possibility of hazardous reactions

Possibility of hazardous reactions Dust can form an explosive mixture with air.

Conditions to avoid

Conditions to avoid Dust formation. Static discharge (electrostatic discharge).

Incompatible materials

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Copper compounds.

**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:

<b>Inhalation</b>	May cause irritation of respiratory tract. Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Dust contact with the eyes can lead to mechanical irritation.
<b>Skin contact</b>	Contact with dust can cause mechanical irritation or drying of the skin.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

**Symptoms** No information available.

**Acute toxicity****Numerical measures of toxicity****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Copper gluconate	= 66 mg/kg ( Rat ) = 1709 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**

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	No information available.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

**Ecotoxicity** Very toxic to aquatic life. Keep out of waterways.

**Terrestrial ecotoxicity** Toxic to terrestrial vertebrates.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Copper gluconate	EC50: = 0.126 mg/L (72h, Pseudokirchneriella subcapitata)	LC50: = 0.37 mg/L (96h, Oncorhynchus mykiss)	EC50: = 0.74 mg/L (48h, Daphnia magna)

#### Persistence and degradability

**Persistence and degradability** Not readily biodegradable.

#### 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 products** Class 9.1 substances – if the substance, or if it contains a component that is bioaccumulative and not rapidly degradable, then any component that is bioaccumulative and not rapidly degradable must be removed. The product may only be discharged into the environment if an environmental exposure limit has been set for the substance (or a component of the substance); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the environmental exposure limit

**Contaminated packaging** 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

**ROAD AND RAIL TRANSPORT** Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

**UN number** 3077  
**Proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER GLUCONATE)  
**Hazard class** 9  
**Packing group** III  
**Environmental hazard** Yes  
**Hazchem code** 2Z



**IATA** Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

**UN number** 3077  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER GLUCONATE)  
**Transport hazard class(es)** 9  
**Packing group** III

**IMDG** Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

**UN number** 3077  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER GLUCONATE)  
**Transport hazard class(es)** 9  
**Packing group** III  
**IMDG EMS Fire** F-A  
**IMDG EMS Spill** S-F  
**Marine pollutant** 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

**EPA New Zealand HSNO approval code or group standard** HSR003969

Chemical name	New Zealand HSNO Chemical Classification
Copper gluconate - 527-09-3	6.1D (All),6.1D (O),6.9B (All),6.9B (O),9.1A (All),9.1A (A),9.1A (C),9.1A (F),9.3B

#### International Inventories

**NZIoC** This material is listed on the New Zealand Inventory of Chemicals.  
**TSCA** Contact supplier for inventory compliance status.  
**DSL/NDSL** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AICS** This material is listed on the Australian Inventory of Industrial Chemicals.

#### Legend:

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

**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; 12/ 2019

**Prepared By** This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).**Issuing Date:** 23-Feb-2021**Reason(s) For Issue:** Revised Primary SDS  
Change in Hazardous Chemical Classification  
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

**Disclaimer**

**This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

If clarification or further information is needed, the user should contact their Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris.

**End of Safety Data Sheet**