

### 1. IDENTIFICATION

<b>Product Name</b>	<b>Copper 8-hydroxyquinoleate</b>
<b>Other Names</b>	Oxine-copper
<b>Uses</b>	Laboratory chemicals, Manufacture of substances.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	C <sub>18</sub> H <sub>12</sub> CuN <sub>2</sub> O <sub>2</sub>
<b>Chemical Name</b>	Copper 8-hydroxyquinoleate
<b>Product Description</b>	8-Hydroxyquinoline copper(II) salt (CAS No. 13014-03-4)

#### Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

#### Emergency Contact Details

*For emergencies only; DO NOT contact these companies for general product advice.*

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

### 2. HAZARD IDENTIFICATION

**Poisons Schedule (Aust)** Schedule 6

#### Globally Harmonised System

<b>Hazard Classification</b>	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
<b>Hazard Categories</b>	Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Irritation - Category 2A Specific Target Organ Toxicity (Single Exposure) - Category 3

**Pictograms**



**Signal Word** Warning

<b>Hazard Statements</b>	<b>H315</b>	Causes skin irritation.
	<b>H319</b>	Causes serious eye irritation.
	<b>H335</b>	May cause respiratory irritation.

<b>Precautionary Statements</b>	Prevention	<b>P280</b>	Wear protective gloves/eye protection/face protection.
		<b>P261</b>	Avoid breathing dust.
		<b>P271</b>	Use only outdoors or in a well-ventilated area.
	Response	<b>P302 + P352</b>	IF ON SKIN: Wash with plenty of soap and water.
		<b>P337 + P313</b>	If eye irritation persists: Get medical advice/attention.
		<b>P312</b>	Call a POISON CENTER or doctor/physician if you feel unwell.
		<b>P332 + P313</b>	If skin irritation occurs: Get medical advice/attention.
		<b>P362</b>	Take off contaminated clothing and wash before reuse.
	Storage	<b>P305 + P351 + P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		<b>P304 + P340</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
		<b>P403 + P233</b>	Store in a well-ventilated place. Keep container tightly closed.
	Disposal	<b>P405</b>	Store locked up.
		<b>P501</b>	Dispose of contents/container in accordance with local / regional / national / international regulations.

**National Transport Commission (Australia)**

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

**Dangerous Goods Classification** NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

**Environmental Protection Authority (New Zealand)**

Hazardous Substances and New Organisms Amendment Act 2015

<b>HSNO Classifications</b>	Health Hazards	<b>6.1B</b>	Substances that are acutely toxic - Fatal
		<b>6.4A</b>	Substances that are irritating to the eye
		<b>6.5A</b>	Substances that are respiratory sensitisers
	Environmental Hazards	<b>6.1E</b>	Substances that are acutely toxic –May be harmful, Aspiration hazard
		<b>9.1A</b>	Substances that are very ecotoxic in the aquatic environment
		<b>9.3C</b>	Substances that are harmful to terrestrial vertebrates

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Copper 8-hydroxyquinoleate	C <sub>18</sub> H <sub>12</sub> CuN <sub>2</sub> O <sub>2</sub>	10380-28-6	<=100 %

### 4. FIRST AID MEASURES

#### Description of necessary measures according to routes of exposure

<b>Swallowed</b>	If swallowed: Rinse mouth. Call a Poison Centre or doctor/physician if you feel unwell. Never give anything by mouth to an unconscious person.
<b>Eye</b>	Eye contact: Immediately flush eyes with running water for several minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
<b>Skin</b>	Skin contact: Remove material from skin immediately. Flush skin with running water for several minutes/wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
<b>Inhaled</b>	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult. Call a Poison Centre or doctor/physician if experiencing respiratory symptoms, or if you feel unwell.
<b>Advice to Doctor</b>	Treat symptomatically. - Show this safety data sheet to the doctor in attendance.
<b>Medical Conditions Aggravated by Exposure</b>	No information available.

### 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out.
<b>Flammability Conditions</b>	May burn but does not ignite readily.
<b>Extinguishing Media</b>	In case of fire: Use water spray, (alcohol-resistant) foam, dry chemical or Carbon dioxide for extinction.
<b>Fire and Explosion Hazard</b>	No information available.
<b>Hazardous Products of Combustion</b>	The substance decomposes on burning producing toxic and corrosive fumes including: Carbon oxides, Nitrogen oxides (NO <sub>x</sub> ), Copper oxides.
<b>Special Fire Fighting Instructions</b>	No information available.
<b>Personal Protective Equipment</b>	Wear self contained breathing apparatus for fire fighting if necessary.
<b>Flash Point</b>	No Data Available
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	No Data Available

### 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid breathing dust. Avoid contact with eyes and skin.
<b>Clean Up Procedures</b>	Avoid dust formation. Sweep/shovel spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to a safe place for later disposal.

<b>Containment</b>	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Prevent dust cloud.
<b>Decontamination</b>	Do NOT wash away into sewer.
<b>Environmental Precautionary Measures</b>	Do not let product enter drains.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Evacuate personnel to safe areas. Keep unauthorised personnel away.
<b>Personal Precautionary Measures</b>	Use personal protective equipment (see Section 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	Safety showers and eyewash fountains should be provided within the immediate work area for emergency use. Provide appropriate exhaust ventilation at places where dust is formed. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Avoid dispersion of dust. Avoid breathing dust and aerosols. Avoid contact with eyes and skin.
<b>Storage</b>	Store in a cool, dry and well-ventilated place. Keep container tightly closed. Keep away from strong oxidising agents.
<b>Container</b>	Keep in the original container.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	Contains no substances with occupational exposure limit values. For dusts from solid substances without specific occupational exposure standards: - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m <sup>3</sup> (total). TWA = 3 mg/m <sup>3</sup> (respirable). - OSHA PEL (Particulates not otherwise regulated): TWA = 15 mg/m <sup>3</sup> (total). TWA = 5 mg/m <sup>3</sup> (respirable).
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	Provide appropriate exhaust ventilation at places where dust is formed.
<b>Personal Protection Equipment</b>	Respiratory protection: For nuisance exposure, use a particle filtering respirator (type P1). For higher level protection, use a combination filter (type ABEK-P2). Use respirators and components tested and approved under appropriate government standards. Eye/face protection: Wear safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards. Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Skin/body protection: The type of protective clothing/equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Recommended: Impervious clothing.
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Do not eat, drink, or smoke during work. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Crystalline powder
<b>Odour</b>	No information available.
<b>Colour</b>	Green to yellow
<b>pH</b>	No Data Available
<b>Vapour Pressure</b>	No Data Available
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	No Data Available
<b>Melting Point</b>	240 °C - Decomposes

<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	No Data Available
<b>Specific Gravity</b>	1.63 (Water = 1)
<b>Flash Point</b>	No Data Available
<b>Auto Ignition Temp</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	No Data Available
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	LogPow = 2.46
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	No Data Available
<b>Potential for Dust Explosion</b>	No information available.
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No information available.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No information available.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	May burn but does not ignite readily.
<b>Reactions That Release Gases or Vapours</b>	The substance decomposes on burning producing toxic and corrosive fumes including: Carbon oxides, Nitrogen oxides (NOx), Copper oxides.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under recommended conditions.
<b>Conditions to Avoid</b>	Avoid dust formation. Avoid dispersion of dust.
<b>Materials to Avoid</b>	Incompatible with strong oxidising agents.
<b>Hazardous Decomposition Products</b>	The substance decomposes on burning producing toxic and corrosive fumes including: Carbon oxides, Nitrogen oxides (NOx), Copper oxides.
<b>Hazardous Polymerisation</b>	No information available.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
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Routes of Exposure:  
- Inhalation: May cause respiratory irritation. Inhalation of its aerosol may cause asthmatic reactions. Repeated or prolonged inhalation exposure may cause asthma.  
- Eye contact: Causes serious eye irritation.  
- Skin contact: Causes skin irritation.  
- Ingestion: May cause abdominal pain, laboured breathing, vomiting.

**Carcinogen Category** None

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** No information available.  
**Persistence/Degradability** No information available.  
**Mobility** No information available.  
**Environmental Fate** The substance is very toxic to aquatic organisms. Avoid release to the environment in circumstances different to normal use.  
**Bioaccumulation Potential** No information available.  
**Environmental Impact** No Data Available

## 13. DISPOSAL CONSIDERATIONS

**General Information** Dispose of contents/container in accordance with local/regional/national regulations. Contact a licensed professional waste disposal service to dispose of surplus and non-recyclable material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.  
**Special Precautions for Land Fill** Contaminated packaging: Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### Land Transport (Australia)

ADG Code

**Proper Shipping Name** Copper 8-hydroxyquinoleate  
**Class** No Data Available  
**Subsidiary Risk(s)** No Data Available  
No Data Available  
**UN Number** No Data Available  
**Hazchem** No Data Available  
**Pack Group** No Data Available  
**Special Provision** No Data Available

### Land Transport (Malaysia)

ADR Code

**Proper Shipping Name** Copper 8-hydroxyquinoleate  
**Class** No Data Available  
**Subsidiary Risk(s)** No Data Available  
No Data Available  
**UN Number** No Data Available

<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

#### Land Transport (New Zealand)

NZS5433

<b>Proper Shipping Name</b>	Copper 8-hydroxyquinoleate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

#### Land Transport (United States of America)

US DOT

<b>Proper Shipping Name</b>	Copper 8-hydroxyquinoleate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

#### Sea Transport

IMDG Code

<b>Proper Shipping Name</b>	Copper 8-hydroxyquinoleate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>EMS</b>	No Data Available
<b>Marine Pollutant</b>	No

#### Air Transport

IATA DGR

<b>Proper Shipping Name</b>	Copper 8-hydroxyquinoleate
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available

#### National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

**Dangerous Goods Classification**

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road &amp; Rail (ADG Code)

**15. REGULATORY INFORMATION****General Information** No Data Available**Poisons Schedule (Aust)** Schedule 6**Environmental Protection Authority (New Zealand)**

Hazardous Substances and New Organisms Amendment Act 2015

**Approval Code** HSR003106**National/Regional Inventories**

<b>Australia (AICS)</b>	Listed
<b>Canada (DSL)</b>	Not Listed
<b>Canada (NDSL)</b>	Listed
<b>China (IECSC)</b>	Listed
<b>Europe (EINECS)</b>	Listed
<b>Europe (REACH)</b>	Pre-registered
<b>Japan (ENCS/METI)</b>	Listed
<b>Korea (KECI)</b>	Listed
<b>Malaysia (EHS Register)</b>	Not Determined
<b>New Zealand (NZIoC)</b>	Listed
<b>Philippines (PICCS)</b>	Listed
<b>Switzerland (Giftliste 1)</b>	Not Determined
<b>Switzerland (Inventory of Notified Substances)</b>	Not Determined
<b>Taiwan (NCSR)</b>	Listed
<b>USA (TSCA)</b>	Listed

**16. OTHER INFORMATION****Related Product Codes** COHYQU1000, COHYQU1001, COHYQU1002, COHYQU2000**Revision** 3**Revision Date** 10 Oct 2017**Key/Legend**  
< Less Than  
> Greater Than  
**AICS** Australian Inventory of Chemical Substances



**atm** Atmosphere  
**CAS** Chemical Abstracts Service (Registry Number)  
**cm<sup>2</sup>** Square Centimetres  
**CO<sub>2</sub>** Carbon Dioxide  
**COD** Chemical Oxygen Demand  
**deg C (°C)** Degrees Celcius  
**EPA (New Zealand)** Environmental Protection Authority of New Zealand  
**deg F (°F)** Degrees Farenheit  
**g** Grams  
**g/cm<sup>3</sup>** Grams per Cubic Centimetre  
**g/l** Grams per Litre  
**HSNO** Hazardous Substance and New Organism  
**IDLH** Immediately Dangerous to Life and Health  
**immiscible** Liquids are insoluable in each other.  
**inHg** Inch of Mercury  
**inH<sub>2</sub>O** Inch of Water  
**K** Kelvin  
**kg** Kilogram  
**kg/m<sup>3</sup>** Kilograms per Cubic Metre  
**lb** Pound  
**LC<sub>50</sub>** LC stands for lethal concentration. LC<sub>50</sub> is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.  
**LD<sub>50</sub>** LD stands for Lethal Dose. LD<sub>50</sub> is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.  
**ltr** or **L** Litre  
**m<sup>3</sup>** Cubic Metre  
**mbar** Millibar  
**mg** Milligram  
**mg/24H** Milligrams per 24 Hours  
**mg/kg** Milligrams per Kilogram  
**mg/m<sup>3</sup>** Milligrams per Cubic Metre  
**Misc** or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.  
**mm** Millimetre  
**mmH<sub>2</sub>O** Millimetres of Water  
**mPa.s** Millipascals per Second  
**N/A** Not Applicable  
**NIOSH** National Institute for Occupational Safety and Health  
**NOHSC** National Occupational Health and Safety Commission  
**OECD** Organisation for Economic Co-operation and Development  
**Oz** Ounce  
**PEL** Permissible Exposure Limit  
**Pa** Pascal  
**ppb** Parts per Billion  
**ppm** Parts per Million  
**ppm/2h** Parts per Million per 2 Hours  
**ppm/6h** Parts per Million per 6 Hours  
**psi** Pounds per Square Inch  
**R** Rankine  
**RCP** Reciprocal Calculation Procedure  
**STEL** Short Term Exposure Limit  
**TLV** Threshold Limit Value  
**tne** Tonne  
**TWA** Time Weighted Average  
**ug/24H** Micrograms per 24 Hours  
**UN** United Nations  
**wt** Weight