

# MM Kembla Phosphorus Deoxidized Copper

## Metal Manufactures

Chemwatch Hazard Alert Code: 2

Chemwatch: 5072-83

Version No: 4.1.1.1

Safety Data Sheet according to WHS and ADG requirements

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S.GHS.AUS.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### Product Identifier

Product name	MM Kembla Phosphorus Deoxidized Copper
Synonyms	Not Available
Other means of identification	Not Available

### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Hardened, toughened copper for non electrical uses.
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### Details of the supplier of the safety data sheet

Registered company name	Metal Manufactures
Address	Gloucester Boulevard Port Kembla NSW 2505 Australia
Telephone	+61 2 4223 5300
Fax	+61 2 4223 5288
Website	<a href="https://www.kembla.com/material-safety-data-sheets">https://www.kembla.com/material-safety-data-sheets</a>
Email	hzotter@kembla.com.au

### Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

## SECTION 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture


**HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.**

#### CHEMWATCH HAZARD RATINGS

	Min	Max	
Flammability	0		
Toxicity	2		0 = Minimum 1 = Low 2 = Moderate 3 = High 4 = Extreme
Body Contact	1		
Reactivity	2		
Chronic	2		

Poisons Schedule	Not Applicable
Classification <sup>[1]</sup>	Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

### Label elements

Hazard pictogram(s)	
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SIGNAL WORD **WARNING**

### Hazard statement(s)

H373	May cause damage to organs through prolonged or repeated exposure.
H402	Harmful to aquatic life.

### Precautionary statement(s) Prevention

## MM Kembla Phosphorus Deoxidized Copper

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.

## Precautionary statement(s) Response

P314	Get medical advice/attention if you feel unwell.
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## Precautionary statement(s) Storage

Not Applicable

## Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

## Substances

See section below for composition of Mixtures

## Mixtures

CAS No	%[weight]	Name
7440-50-8	99	<u>copper</u>
12185-10-3	0.05 max <sup>^</sup>	<u>phosphorus, white</u>
Composition is generic for all phosphorised copper		

## SECTION 4 FIRST AID MEASURES

## Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If dust is inhaled, remove from contaminated area.</li> <li>▶ Encourage patient to blow nose to ensure clear passage of breathing.</li> <li>▶ If irritation or discomfort persists seek medical attention.</li> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>
<b>Ingestion</b>	<p>Rinse mouth out with plenty of water.</p> <p>If poisoning occurs, contact a doctor or Poisons Information Centre.</p> <ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> </ul>

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

Copper, magnesium, aluminium, antimony, iron, manganese, nickel, zinc (and their compounds) in welding, brazing, galvanising or smelting operations all give rise to thermally produced particulates of smaller dimension than may be produced if the metals are divided mechanically. Where insufficient ventilation or respiratory protection is available these particulates may produce "metal fume fever" in workers from an acute or long term exposure.

- ▶ Onset occurs in 4-6 hours generally on the evening following exposure. Tolerance develops in workers but may be lost over the weekend. (Monday Morning Fever)
- ▶ Pulmonary function tests may indicate reduced lung volumes, small airway obstruction and decreased carbon monoxide diffusing capacity but these abnormalities resolve after several months.
- ▶ Although mildly elevated urinary levels of heavy metal may occur they do not correlate with clinical effects.
- ▶ The general approach to treatment is recognition of the disease, supportive care and prevention of exposure.
- ▶ Seriously symptomatic patients should receive chest x-rays, have arterial blood gases determined and be observed for the development of tracheobronchitis and pulmonary edema.

[Ellenhorn and Barceloux: Medical Toxicology]

## SECTION 5 FIREFIGHTING MEASURES

## Extinguishing media

Metal dust fires need to be smothered with sand, inert dry powders.

**DO NOT USE WATER, CO2 or FOAM.**

- ▶ Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1 or Met L-X to smother fire.
- ▶ Confining or smothering material is preferable to applying water as chemical reaction may produce flammable and explosive hydrogen gas.

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## Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	Avoid contact with acetylene, ammonium nitrate, barium bromate, chlorate and iodate, bromates, phosphorus, potassium chlorate, potassium iodate, potassium peroxide, sodium azide, sodium chlorate and iodate, sodium peroxide, sulfur and chlorates.
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## Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> </ul>
<b>Fire/Explosion Hazard</b>	<p>Does not burn.</p> <ul style="list-style-type: none"> <li>▶ Metal powders, while generally regarded as non-combustible, may burn when metal is finely divided and energy input is high.</li> <li>▶ <b>DO NOT</b> use water or foam as generation of explosive hydrogen may result.</li> <li>▶ May be ignited by friction, heat, sparks or flame.</li> <li>▶ Metal dust fires are slow moving but intense and difficult to extinguish.</li> </ul>
<b>HAZCHEM</b>	Not Applicable

## SECTION 6 ACCIDENTAL RELEASE MEASURES

## Personal precautions, protective equipment and emergency procedures

See section 8

## Environmental precautions

See section 12

## Methods and material for containment and cleaning up

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Secure load if safe to do so.</li> <li>▶ Bundle/collect recoverable product.</li> <li>▶ Collect remaining material in containers with covers for disposal.</li> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Secure load if safe to do so.</li> <li>▶ Bundle/collect recoverable product.</li> <li>▶ Collect remaining material in containers with covers for disposal.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

## Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Limit all unnecessary personal contact.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ <b>When handling DO NOT eat, drink or smoke.</b></li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Keep dry.</li> <li>▶ Store under cover.</li> <li>▶ Protect containers against physical damage.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>

## Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Packaging as recommended by manufacturer.</li> <li>▶ Check that containers are clearly labelled</li> </ul> <p>Store flat in load designed racking.</p> <ul style="list-style-type: none"> <li>▶ Heavy gauge metal packages / Heavy gauge metal drums</li> </ul>
<b>Storage incompatibility</b>	<p>Segregate from amp;44n, ammonia</p> <p>Avoid contact with acids as toxic phosphine gas may result.</p>

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

## Control parameters

## OCCUPATIONAL EXPOSURE LIMITS (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	copper	Copper (fume)	0.2 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	copper	Copper, dusts & mists (as Cu)	1 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	phosphorus, white	Phosphorus (yellow)	0.1 mg/m3	Not Available	Not Available	Not Available

## EMERGENCY LIMITS


Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
copper	Copper	3 mg/m3	33 mg/m3	200 mg/m3

Continued...

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phosphorus, white	Phosphorus (yellow); (White phosphorus)	0.3 mg/m3	0.91 mg/m3	5.5 mg/m3
phosphorus, white	Phosphorus (red)	0.27 mg/m3	3 mg/m3	18 mg/m3
Ingredient	Original IDLH	Revised IDLH		
copper	100 mg/m3	Not Available		
phosphorus, white	5 mg/m3	Not Available		

## Exposure controls

<b>Appropriate engineering controls</b>	<p>Use in a well-ventilated area</p> <ul style="list-style-type: none"> <li>Hazard relates to dust released by cutting, grinding, trimming or other shaping operations.</li> </ul> <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>Safety glasses with side shields; or as required,</li> <li>Chemical goggles.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.</li> <li>Goggles or other suitable eye protection shall be used during all gas welding or oxygen cutting operations. Spectacles without side shields, with suitable filter lenses are permitted for use during gas welding operations on light work, for torch brazing or for inspection.</li> <li>For most open welding/brazing operations, goggles, even with appropriate filters, will not afford sufficient facial protection for operators. Where possible use welding helmets or handshields corresponding to EN 175, ANSI Z49:12005, AS 1336 and AS 1338 which provide the maximum possible facial protection from flying particles and fragments.</li> </ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>Cotton gloves</li> </ul> <p>amp;11o amp;72b amp;11o amp;z631</p> <ul style="list-style-type: none"> <li>When handling hot or molten liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<p>No special equipment needed when handling small quantities.</p> <p><b>OTHERWISE:</b></p> <ul style="list-style-type: none"> <li>Overalls.</li> <li>Barrier cream.</li> <li>Eyewash unit.</li> </ul>
<b>Thermal hazards</b>	Not Available

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

<b>Appearance</b>	Coppery red / yellow to gold metal; no odour. Insoluble in water. (Copper which has been deoxidised with phosphor copper.) Available as billets, rod, tube, shapes.		
<b>Physical state</b>	Manufactured	<b>Relative density (Water = 1)</b>	8.7-9.0
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature</b>	Not available.
<b>Melting point / freezing point (°C)</b>	1050-1100	<b>Viscosity (cSt)</b>	Not Applicable
<b>Initial boiling point and boiling range (°C)</b>	2300-2350	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	Non Flammable	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Non Volatile	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Non Flammable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Applicable	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Applicable
<b>Lower Explosive Limit (%)</b>	Not Applicable	<b>Volatile Component (%vol)</b>	Negligible
<b>Vapour pressure (kPa)</b>	Not Applicable	<b>Gas group</b>	Not Available
<b>Solubility in water (g/L)</b>	Immiscible	<b>pH as a solution (1%)</b>	Not Applicable
<b>Vapour density (Air = 1)</b>	Not Applicable	<b>VOC g/L</b>	Not Available

## SECTION 10 STABILITY AND REACTIVITY

<b>Reactivity</b>	See section 7
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## MM Kembla Phosphorus Deoxidized Copper

<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

<b>Inhaled</b>	<p>Not normally a hazard due to non-volatile nature of product Generated dust may be discomforting amp;5400 amp;11amb amp;5044 amp;5421 Inhalation hazard is increased at higher temperatures. Inhalation of fumes (as from welding) may cause , coughing , nasal irritation Inhalation of fume may aggravate a pre-existing respiratory condition such as asthma, bronchitis, emphysema Copper poisoning following exposure to copper dusts and fume may result in headache, cold sweat and weak pulse. Capillary, kidney, liver and brain damage are the longer term manifestations of such poisoning. Inhalation of freshly formed metal oxide particles sized below 1.5 microns and generally between 0.02 to 0.05 microns may result in "metal fume fever". Symptoms may be delayed for up to 12 hours and begin with the sudden onset of thirst, and a sweet, metallic or foul taste in the mouth.  Nasal ulcerations with resultant nose-bleed may occur following inhalation of fine dusts.</p>
<b>Ingestion</b>	<p>Considered an unlikely route of entry in commercial/industrial environments Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract amp;11a amp;5022 amp;5044 amp;5110 A metallic taste, nausea, vomiting and burning feeling in the upper stomach region occur after ingestion of copper and its derivatives. The vomitus is usually green/blue and discolours contaminated skin.  If vomiting does not occur immediately, systemic copper poisoning may occur; capillary damage, headache, cold sweat, weak pulse, kidney and liver damage may be the result of poisoning.</p>
<b>Skin Contact</b>	<p>The material may be amp;5054 amp;11amc amp;51lac2 Irritation and skin reactions are possible with sensitive skin Exposure to copper, by skin, has come from its use in pigments, ointments, ornaments, jewellery, dental amalgams and IUDs (intra-uterine devices), and in killing fungi and algae. Although copper is used in the treatment of water in swimming pools and reservoirs, there are no reports of toxicity from these applications.  Contact with surface film of lubricant may cause reactions.</p>
<b>Eye</b>	<p>Particulate/dust is amp;5020 amp;5040 amp;11a amp;5054 amp;5200 Fumes from welding/brazing operations may be irritating to the eyes.</p>
<b>Chronic</b>	<p>Principal routes of exposure are usually by , inhalation of generated dust , inhalation of fumes from the heated material amp;11a amp;5541mm For copper and its compounds (typically copper chloride): Acute toxicity: There are no reliable acute oral toxicity results available. Animal testing shows that skin in exposure to copper may lead to hardness of the skin, scar formation, exudation and reddish changes. Inflammation, irritation and injury of the skin were noted. Repeat dose toxicity: Animal testing shows that very high levels of copper monochloride may cause anaemia.  Chronic exposure to copper dusts may result in runny nose, irritation of mucoous membranes and atrophic changes with resultant dementia. Pre-existing skin, kidney, liver and pulmonary disorders may be aggravated by acute exposure.</p>

<b>MM Kembla Phosphorus Deoxidized Copper</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Not Available	Not Available
<b>copper</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Not Available
	Inhalation (rat) LC50: 0.733 mg/l4 h <sup>[1]</sup>	
	Oral (rat) LD50: 300-500 mg/kg <sup>[1]</sup>	
<b>phosphorus, white</b>	<b>TOXICITY</b>	<b>IRRITATION</b>
	Oral (rat) LD50: 11.5 mg/kg <sup>[2]</sup>	Not Available

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

<b>COPPER</b>	<p>for copper and its compounds (typically copper chloride): <b>Acute toxicity:</b> There are no reliable acute oral toxicity results available. In an acute dermal toxicity study (OECD TG 402), one group of 5 male rats and 5 groups of 5 female rats received doses of 1000, 1500 and 2000 mg/kg bw via dermal application for 24 hours. The LD50 values of copper monochloride were 2,000 mg/kg bw or greater for male (no deaths observed) and 1,224 mg/kg bw for female. Four females died at both 1500 and 2000 mg/kg bw, and one at 1,000 mg/kg bw. WARNING: Inhalation of high concentrations of copper fume may cause "metal fume fever", an acute industrial disease of short duration. Symptoms are tiredness, influenza like respiratory tract irritation with fever.</p>
<b>PHOSPHORUS, WHITE</b>	<p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.</p>

## MM Kembla Phosphorus Deoxidized Copper

Acute Toxicity	⊘	Carcinogenicity	⊘
Skin Irritation/Corrosion	⊘	Reproductivity	⊘
Serious Eye Damage/Irritation	⊘	STOT - Single Exposure	⊘
Respiratory or Skin sensitisation	⊘	STOT - Repeated Exposure	✓
Mutagenicity	⊘	Aspiration Hazard	⊘

Legend: ✗ – Data available but does not fill the criteria for classification

✓ – Data available to make classification

⊘ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

MM Kembla Phosphorus Deoxidized Copper	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available

copper	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.0028mg/L	2
	EC50	48	Crustacea	0.001mg/L	5
	EC50	72	Algae or other aquatic plants	0.013335mg/L	4
	BCF	960	Fish	200mg/L	4
	EC25	6	Algae or other aquatic plants	0.00150495mg/L	4
	NOEC	96	Crustacea	0.0008mg/L	4

phosphorus, white	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.002mg/L	4
	EC50	48	Crustacea	>0.03mg/L	2
	EC50	72	Algae or other aquatic plants	ca.1.3mg/L	2
NOEC	5784	Fish	=0.0004mg/L	1	

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

## Bioaccumulative potential

Ingredient	Bioaccumulation
phosphorus, white	HIGH (BCF = 2310000)

## Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

## SECTION 13 DISPOSAL CONSIDERATIONS

## Waste treatment methods

Product / Packaging disposal
<ul style="list-style-type: none"> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Management Authority for disposal.</li> <li>▶ Bury residue in an authorised landfill.</li> </ul>

## SECTION 14 TRANSPORT INFORMATION

## Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

## SECTION 15 REGULATORY INFORMATION

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

**COPPER(7440-50-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

**PHOSPHORUS, WHITE(12185-10-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (copper; phosphorus, white)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (copper; phosphorus, white)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
<b>Legend:</b>	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

## SECTION 16 OTHER INFORMATION

**Other information**

**Ingredients with multiple cas numbers**

Name	CAS No
copper	7440-50-8, 133353-46-5, 133353-47-6, 195161-80-9, 65555-90-0, 72514-83-1
phosphorus, white	12185-10-3, 7723-14-0

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

**Definitions and abbreviations**

PC – TWA: Permissible Concentration-Time Weighted Average  
 PC – STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit  
 TEEL: Temporary Emergency Exposure Limit.  
 IDLH: Immediately Dangerous to Life or Health Concentrations  
 OSF: Odour Safety Factor  
 NOAEL :No Observed Adverse Effect Level  
 LOAEL: Lowest Observed Adverse Effect Level  
 TLV: Threshold Limit Value  
 LOD: Limit Of Detection  
 OTV: Odour Threshold Value  
 BCF: BioConcentration Factors  
 BEI: Biological Exposure Index

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