

Lead Free Solder Wire SN99.25CU0.75 #273-249, 273-255, 431-4117, 431-4123**Lead Free Solder Wire SN99.25CU0.75 #273-249, 273-255, 431-4117, 431-4123**

RS Components

Chemwatch: 4876-68

Version No: 2.1.1.1

Material Safety Data Sheet according to NOHSC and ADG requirements

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SECTION 1 Identification of the substance / mixture and of the company / undertaking**Product Identifier**

Product name:	Lead Free Solder Wire SN99.25CU0.75 #273-249, 273-255, 431-4117, 431-4123
Chemical Name:	Not Applicable
Synonyms:	Not Available
Proper shipping name:	
Chemical formula:	Not Applicable
Other means of identification:	Not Available
CAS number:	Not Applicable

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

Relevant identified uses:	Soldering.
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Details of the supplier of the safety data sheet

Registered company name:	RS Components	RS Components
Address:	25 Pavesi Street Smithfield 2164 NSW Australia	Units 30 & 31, 761 Great South Road Penrose 1006 Auckland New Zealand
Telephone:	+1 300 656 636	+64 9 526 1600
Fax:	+1 300 656 696	+64 9 579 1700
Website:	Not Available	www.rsnewzealand.com
Email:	Not Available	Not Available

Emergency telephone number

Association / Organisation:	Not Available	Not Available
Emergency telephone numbers:	1800 039 008 (24 hours),+61 3 9573 3112	Not Available
Other emergency telephone numbers:	1800 039 008 (24 hours),+61 3 9573 3112	Not Available

SECTION 2 Hazards identification**Classification of the substance or mixture****NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.****Poisons Schedule:****Risk Phrases**

Not Applicable

Legend: 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI**Label elements**

Not Applicable

Relevant risk statements are found in section 2

Indication(s) of danger:	Not Applicable
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Safety advice:

Not Applicable

Other hazards

Possible skin sensitizer*.

Cumulative effects may result following exposure*.

May produce discomfort of the respiratory system*.

SECTION 3 Composition / information on ingredients**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Not Available	>90	solder wire alloy consisting of
7440-31-5	NotSpec.	tin
7440-50-8	NotSpec.	copper

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	NotSpec.	In use product produces soldering volatiles as
7440-31-5	NotSpec.	tin fume
7440-50-8.	NotSpec.	copper fume

SECTION 4 First aid measures

Description of first aid measures

Eye Contact:

- Particulate bodies from welding spatter may be removed carefully.
- **DO NOT attempt to remove particles attached to or embedded in eye.**
- Lay victim down, on stretcher if available and pad **BOTH** eyes, make sure dressing does not press on the injured eye by placing thick pads under dressing, above and below the eye.
- Seek urgent medical assistance, or transport to hospital.

Arc rays can injure eyes

Skin Contact:

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Arc rays can burn skin

Inhalation:

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- 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.
- Transport to hospital, or doctor.

Ingestion:

Not normally a hazard due to physical form of product.

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

- There is no restriction on the type of extinguisher which may be used.

Special hazards arising from the substrate or mixture

Fire Incompatibility:

Welding electrodes should not be allowed to come into contact with strong acids or other substances which are corrosive to metals. Welding arc and metal sparks can ignite combustibles.

Advice for firefighters

Fire Fighting:

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- **DO NOT** approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard:

- Non combustible.
- Not considered to be a significant fire risk, however containers may burn.
- In a fire may decompose on heating and produce toxic / corrosive fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Minor Spills:

Clean up all spills immediately.

Avoid contact with skin and eyes.

Wear impervious gloves and safety glasses.

Use dry clean up procedures and avoid generating dust.

Place in suitable containers for disposal.

Major Spills:

Minor hazard.

- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.

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- Control personal contact with the substance, by using protective equipment as required.
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, **DO NOT eat, drink or smoke.**
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Other information

- Keep dry.
- Store under cover.
- Protect containers against physical damage.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.

Conditions for safe storage, including any incompatibilities

Suitable container:

- Packaging as recommended by manufacturer.
- Check that containers are clearly labelled

Storage incompatibility:

- Avoid reaction with oxidising agents

Package Material Incompatibilities:

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	tin	Tin, metal / Tin, organic compounds (as Sn) / Tin, oxide & inorganic compounds, except SnH4 (as Sn)	2 (mgm3) / 0.1 (mgm3)	0.2 (mgm3)	Not Available	Not Available
Australia Exposure Standards	copper	Copper (fume) / Copper, dusts & mists (as Cu)	0.2 (mgm3) / 1 (mgm3)	Not Available	Not Available	Not Available
Australia Exposure Standards	tin fume	Tin, metal / Tin, organic compounds (as Sn) / Tin, oxide & inorganic compounds, except SnH4 (as Sn)	2 (mgm3) / 0.1 (mgm3)	0.2 (mgm3)	Not Available	Not Available
Australia Exposure Standards	copper fume	Copper (fume) / Copper, dusts & mists (as Cu)	0.2 (mgm3) / 1 (mgm3)	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
tin	2(ppm)	6(ppm)	100(ppm)	100(ppm)
copper	1(ppm)	1(ppm)	1(ppm)	100(ppm)
tin fume	2(ppm)	6(ppm)	100(ppm)	100(ppm)
copper fume	1(ppm)	1(ppm)	1(ppm)	100(ppm)

Ingredient	Original IDLH	Revised IDLH
tin	400 / Unknown(mgm3)Unknown(ppm)	100 / 25(mgm3)
copper	N.E.(mgm3)N.E.(ppm)	100(mgm3)
tin fume	400 / Unknown(mgm3)Unknown(ppm)	100 / 25(mgm3)
copper fume	N.E.(mgm3)N.E.(ppm)	100(mgm3)

Exposure controls

Appropriate engineering controls

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.

The basic types of engineering controls are:

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Process controls which involve changing the way a job activity or process is done to reduce the risk.

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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Special ventilation requirements apply for processes which result in the generation of barium, chromium, lead, or nickel fume and in those processes which generate ozone.

The use of mechanical ventilation by local exhaust systems is required as a minimum in all circumstances (including outdoor work). (In confined spaces always check that oxygen has not been depleted by excessive rusting of steel or snowflake corrosion of aluminium)

Local exhaust systems must be designed to provide a minimum capture velocity at the fume source, away from the worker, of 0.5 metre/sec. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
welding, brazing fumes (released at relatively low velocity into moderately still air)	0.5-1.0 m/s (100-200 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of welding or brazing fumes generated 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used. If risk of inhalation or overexposure exists, wear SAA approved respirator or work in fume hood.

Personal protection



Eye and face protection:

Welding helmet with suitable filter. Welding hand shield with suitable filter.

- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens 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. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

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 AS 1336 and AS 1338 which provide the maximum possible facial protection from flying particles and fragments. [WRIA-WTIA Technical Note 7]

Skin protection:

See Hand protection below

Hand protection:

Welding Gloves
Safety footwear

Body protection:

See Other protection below

Other protection:

Overalls

- Eyewash unit.

Aprons, sleeves, shoulder covers, leggings or spats of pliable flame resistant leather or other suitable materials may also be required in positions where these areas of the body will encounter hot metal.

Thermal hazards:

Recommended material(s):	Respiratory protection:
	Type AE Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Glossy silver metallic solid; insoluble in water.

Physical state	Manufactured	Relative density (Water = 1)	7.31 approx.
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	227	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available

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Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Applicable
Vapour density (Air = 1)	Not Applicable		

SECTION 10 Stability and reactivity

Reactivity:
See section 7
Chemical stability:
<ul style="list-style-type: none"> Presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions:
See section 7
Conditions to avoid:
See section 7
Incompatible materials:
See section 7
Hazardous decomposition products:
See section 5

SECTION 11 Toxicological information

Information on toxicological effects
Inhaled:
Fumes evolved during welding operations may be irritating to the upper-respiratory tract and may be harmful if inhaled.
Ingestion:
Not normally a hazard due to physical form of product.
Skin Contact:
The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.
Eye:
Fumes from welding/brazing operations may be irritating to the eyes.
Chronic:
There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Principal route of exposure is inhalation of welding fumes from electrodes and workpiece. Reaction products arising from electrode core and flux appear as welding fume depending on welding conditions, relative volatilities of metal oxides and any coatings on the workpiece. Studies of lung cancer among welders indicate that they may experience a 30-40% increased risk compared to the general population. Since smoking and exposure to other cancer-causing agents, such as asbestos fibre, may influence these results, it is not clear whether welding, in fact, represents a significant lung cancer risk. Whilst mild steel welding represents little risk, the stainless steel welder, exposed to chromium and nickel fume, may be at risk and it is this factor which may account for the overall increase in lung cancer incidence among welders. Cold isolated electrodes are relatively harmless.

TOXICITY	IRRITATION
Lead Free Solder Wire SN99.25CU0.75 #273-249, 273-255, 431-4117, 431-4123	
Not Available	Not Available
tin	
Not Available	Not Available
copper	
Oral (rat) LD50: 5800 mg/kg	Nil Reported
Not Available	Not Available
tin fume	
Not Available	Not Available
copper fume	
Not Available	Not Available

Not available. Refer to individual constituents.

COPPER

for copper and its compounds (typically copper chloride):

Acute toxicity: 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. Symptom of the hardness of skin, an exudation of hardness site, the formation of scar and reddish changes were observed on application sites in all treated animals. Skin inflammation and injury were also noted. In addition, a reddish or black urine was observed in females at 2,000, 1,500 and 1,000 mg/kg bw. Female rats appeared to be more sensitive than male based on mortality and clinical signs.

No reliable skin/eye irritation studies were available. The acute dermal study with copper monochloride suggests that it has a potential to cause skin irritation.

Repeat dose toxicity: In repeated dose toxicity study performed according to OECD TG 422, copper monochloride was given orally (gavage) to Sprague-Dawley rats for 30 days to males and for 39 - 51 days to females at concentrations of 0, 1.3, 5.0, 20, and 80 mg/kg bw/day. The NOAEL value was 5 and 1.3 mg/kg bw/day for male and female rats, respectively. No deaths were observed in male rats. One treatment-related death was observed in female rats in the high dose group. Erythropoietic toxicity (anaemia) was seen in both sexes at the 80 mg/kg bw/day. The frequency of squamous cell hyperplasia of the forestomach was increased in a dose-dependent manner in male and female rats at all treatment groups, and was statistically significant in males at doses of =20 mg/kg bw/day and in females at doses of =5 mg/kg bw/day doses. The observed effects are considered to be local, non-systemic effect on the forestomach which result from oral (gavage) administration of copper monochloride.

Genotoxicity: An in vitro genotoxicity study with copper monochloride showed negative results in a bacterial reverse mutation test with Salmonella typhimurium strains (TA 98, TA 100, TA 1535, and TA 1537) with and without S9 mix at concentrations of up to 1,000 ug/plate. An in vitro test for chromosome aberration in Chinese hamster lung (CHL) cells showed that copper monochloride induced

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structural and numerical aberrations at the concentration of 50, 70 and 100 ug/mL without S9 mix. In the presence of the metabolic activation system, significant increases of structural aberrations were observed at 50 and 70 ug/mL and significant increases of numerical aberrations were observed at 70 ug/mL. In an in vivo mammalian erythrocyte micronucleus assay, all animals dosed (15 - 60 mg/kg bw) with copper monochloride exhibited similar PCE/(PCE+NCE) ratios and MNPCE frequencies compared to those of the negative control animals. Therefore copper monochloride is not an in vivo mutagen.

Carcinogenicity: there was insufficient information to evaluate the carcinogenic activity of copper monochloride.

Reproductive and developmental toxicity: In the combined repeated dose toxicity study with the reproduction/developmental toxicity screening test (OECD TG 422), copper monochloride was given orally (gavage) to Sprague-Dawley rats for 30 days to males and for 39-51 days to females at concentrations of 0, 1.3, 5.0, 20, and 80 mg/kg bw/day. The NOAEL of copper monochloride for fertility toxicity was 80 mg/kg bw/day for the parental animals. No treatment-related effects were observed on the reproductive organs and the fertility parameters assessed. For developmental toxicity the NOAEL was 20 mg/kg bw/day. Three of 120 pups appeared to have icterus at birth; 4 of 120 pups appeared runted at the highest dose tested (80 mg/kg bw/day).

TIN, TIN FUME

No significant acute toxicological data identified in literature search.

Acute Toxicity:	Not Applicable	Carcinogenicity:	Not Applicable
Skin Irritation/Corrosion:	Not Applicable	Reproductivity:	Not Applicable
Serious Eye Damage/Irritation:	Not Applicable	STOT - Single Exposure:	Not Applicable
Respiratory or Skin sensitisation:	Not Applicable	STOT - Repeated Exposure:	Not Applicable
Mutagenicity:	Not Applicable	Aspiration Hazard:	Not Applicable

CMR STATUS

SECTION 12 Ecological information

Toxicity

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

Mobility in soil

Ingredient	Mobility
Not Available	Not Available

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal:

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required:

Marine Pollutant: NO

HAZCHEM: None

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

SECTION 15 Regulatory information

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

tin(7440-31-5) is found on the following regulatory lists

"Australia - Western Australia Hazardous Substances Prohibited for Specified Uses or Methods of Handling", "OECD List of High Production Volume (HPV) Chemicals", "Australia Inventory of Chemical Substances (AICS)", "Australia Exposure Standards", "Australia Drinking Water Guideline Values For Physical and Chemical Characteristics", "FisherTransport Information", "Sigma-AldrichTransport Information", "Australia Hazardous Substances Information System - Consolidated Lists", "Australia - South Australia - Work Health and Safety Regulations 2012 - Restricted hazardous chemicals", "Australia - New South Wales - Work Health and Safety Regulation 2011 Restricted hazardous chemicals", "Australia - Queensland Work Health and Safety Regulation - Restricted hazardous chemicals", "Australia - Tasmania - Work Health and Safety Regulations 2012 - Restricted hazardous chemicals", "Australia - Northern Territories Work Health and Safety National Uniform Legislation Regulations- Restricted hazardous chemicals", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "Australia Work Health and Safety Regulations 2011 - Restricted hazardous chemicals"

copper(7440-50-8) is found on the following regulatory lists

"International Maritime Dangerous Goods Requirements (IMDG Code) - Marine Pollutants", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Hazardous Substances Information System - Consolidated Lists", "Australia ADI list - Acceptable daily intakes for agricultural and veterinary chemicals", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (AQUA/1 to 6 - inorganic chemicals)", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (IRRIg - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (IRRIg)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (STOCK)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm -

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Domestic water supply quality", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (STOCK - inorganic chemicals)", "OECD List of High Production Volume (HPV) Chemicals", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia Exposure Standards", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "OSPAR National List of Candidates for Substitution – Norway", "Australia Drinking Water Guideline Values For Physical and Chemical Characteristics", "Sigma-Aldrich Transport Information", "Acros Transport Information", "Australia National Pollutant Inventory", "Australia National Environment Protection (Ambient Air Quality) Measure - Schedule 2 Table 1: Standards and Goal for Pollutants other than Particles as PM2.5", "Australia National Environment Protection (Ambient Air Quality) Measure - Schedule 1: Pollutants", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix A", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5"

tin fume(7440-31-5) is found on the following regulatory lists

"Australia - Western Australia Hazardous Substances Prohibited for Specified Uses or Methods of Handling", "OECD List of High Production Volume (HPV) Chemicals", "Australia Inventory of Chemical Substances (AICS)", "Australia Exposure Standards", "Australia Drinking Water Guideline Values For Physical and Chemical Characteristics", "Fisher Transport Information", "Sigma-Aldrich Transport Information", "Australia Hazardous Substances Information System - Consolidated Lists", "Australia - South Australia - Work Health and Safety Regulations 2012 - Restricted hazardous chemicals", "Australia - New South Wales - Work Health and Safety Regulation 2011 Restricted hazardous chemicals", "Australia - Queensland Work Health and Safety Regulation - Restricted hazardous chemicals", "Australia - Tasmania - Work Health and Safety Regulations 2012 - Restricted hazardous chemicals", "Australia - Northern Territories Work Health and Safety National Uniform Legislation Regulations- Restricted hazardous chemicals", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "Australia Work Health and Safety Regulations 2011 - Restricted hazardous chemicals"

copper fume(7440-50-8.) is found on the following regulatory lists

"International Maritime Dangerous Goods Requirements (IMDG Code) - Marine Pollutants", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "Australia Hazardous Substances Information System - Consolidated Lists", "Australia ADI list - Acceptable daily intakes for agricultural and veterinary chemicals", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (AQUA/1 to 6 - inorganic chemicals)", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (IRRIG - inorganic chemicals)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (IRRIG)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (STOCK)", "Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm - Domestic water supply quality", "Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (STOCK - inorganic chemicals)", "OECD List of High Production Volume (HPV) Chemicals", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "Australia Exposure Standards", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "OSPAR National List of Candidates for Substitution – Norway", "Australia Drinking Water Guideline Values For Physical and Chemical Characteristics", "Sigma-Aldrich Transport Information", "Acros Transport Information", "Australia National Pollutant Inventory", "Australia National Environment Protection (Ambient Air Quality) Measure - Schedule 2 Table 1: Standards and Goal for Pollutants other than Particles as PM2.5", "Australia National Environment Protection (Ambient Air Quality) Measure - Schedule 1: Pollutants", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix A", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5"

SECTION 16 Other information

Other information

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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)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.

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