



Infosafe No™	1CHM0	Issue Date : December 2016	RE-ISSUED by CHEMSUPP
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Product Name : **ANTIMONY METAL Powder**

Classified as hazardous

1. Identification

GHS Product Identifier	ANTIMONY METAL Powder	
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)	
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia	
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001	
Recommended use of the chemical and restrictions on use	Hardening alloy for lead, especially storage batteries and cable sheaths, a wide variety of alloys, electronics, bearing metal, type metal, solder, collapsible tubes and foil, sheet and pipe, semiconductor, pyrotechnics, flame-proofing, paints, ceramics, enamels, rubber, textiles, catalysts, pigments and laboratory reagent.	
Other Names	Name	Product Code
	ANTIMONY METAL Powder LR Stibium	AL166
Other Information	EMERGENCY CONTACT NUMBER: +61 08 8440 2000 Business hours: 8:30am to 5:00pm, Monday to Friday.	

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Hazardous to the Aquatic Environment - Long-Term Hazard: Category 2 Acute Toxicity - Inhalation: Category 4 Acute Toxicity - Oral: Category 4
Signal Word (s)	WARNING
Hazard Statement (s)	H302 Harmful if swallowed. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects.
Pictogram (s)	Exclamation mark, Environment



Precautionary statement – Prevention	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment.
Precautionary statement – Response	P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P391 Collect spillage.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients



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Chemical Characterization	Solid				
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
	Antimony	7440-36-0	98-100 %		

4. First-aid measures

Inhalation	Remove from exposure, rest and keep warm. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.
Ingestion	Rinse mouth thoroughly with water immediately. Give plenty of water to drink. Never give anything by mouth to an unconscious person. If swallowed, do NOT induce vomiting. Seek medical attention immediately.
Skin	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention. In severe cases or if irritation persists, seek medical attention.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical attention if any effects of exposure persist, or immediately if extending from physical injury.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically and supportively.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	Toxic fumes of antimony oxides.
Specific Methods	DO NOT USE WATER, FOAM or CO ₂ . Dousing a metallic fire with water may generate hydrogen gas, an extremely dangerous explosion hazard, particularly if fire is in a confined area (e.g. building, cargo hold, etc.) Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1 or Met-L-X to smother fire. Confining or smothering metal fire is preferable to applying water. If safe to do so, move undamaged containers from fire area.
Specific hazards arising from the chemical	May explode from heating, shock, friction or contamination. May be ignited by friction, heat, sparks or flame. Dust or fumes may form explosive mixtures with air. Will burn with intense heat. May re-ignite after fire is extinguished. Fire may produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. May react explosively with water.
Hazchem Code	2X
Precautions in connection with Fire	Wear SCBA. Structural firefighter's uniform will provide limited protection.

6. Accidental release measures

Spills & Disposal	ELIMINATE all ignition sources (no smoking, flares, sparks or flames) within at least 25m. Do not touch or walk through spilled material. Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Personal Precautions	Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.
Environmental Precautions	Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.

7. Handling and storage

Precautions for Safe Handling	Avoid ingestion and inhalation of vapours, or dusts. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Minimize dust generation and accumulation. Keep container closed. Chemicals should be used only by those trained in handling potentially hazardous materials. Operations should be carried out in an efficient fume hood or equivalent system. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Wear suitable protective clothing. The worker should
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immediately wash the skin when it becomes contaminated. Wash thoroughly after handling. Workers whose clothing may have become contaminated should change into uncontaminated clothing before leaving the work premises. Keep material out of water sources and sewers. Separated from strong oxidants, acids, food and feedstuffs. Keep away from heat, sparks and flame and all sources of ignition. Ground all equipment containing material. Empty containers pose a fire risk, evaporate the residue under a fume hood.

Conditions for safe storage, including any incompatibilities Store in tightly sealed containers, in a cool, dry, well-ventilated area away from incompatible substances. Moisture sensitive. Tarnishes in moist air. Protect from moisture, moist air and direct sunlight. Keep away from heat and flame. Separated from strong oxidants, acids, food and feedstuffs.

Storage Regulations Refer Australian Standard AS/NZS 4452:1997 'The storage and handling of toxic substances'.

Storage Temperatures Store at room temperature (15 to 25 °C recommended).

8. Exposure controls/personal protection

Other Exposure Information A time weighted average (TWA) has been established for Antimony & compounds (as Sb) (Worksafe Aust) of 0.5 mg/m³. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.

Appropriate engineering controls In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

Respiratory Protection Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

Eye Protection The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Hand Protection Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Plastic or rubber gloves.

Body Protection Flame retardant protective clothing. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hygiene Measures Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form Solid

Appearance Dark, charcoal-grey, lustrous powder.

Odour Odourless.

Melting Point 630.63 °C

Boiling Point 1950 °C

Solubility in Water Insoluble in hot and cold water.

Solubility in Organic Solvents Soluble in hot concentrated sulphuric acid; attacked readily by aqua regia; insoluble in cold dilute acids.

Specific Gravity 6.697

Vapour Pressure Negligible (133.3 Pa (1 mm Hg) at 886 °C).

Vapour Density (Air=1) 4.2

Evaporation Rate Negligible.

Volatile Component Negligible.

Flammability Combustible.

Auto-Ignition Temperature 330 °C



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Flammable Limits - Lower	1.2%
Flammable Limits - Upper	10.0%
Explosion Limit - Lower	0.42 kg/m ³
Explosion Properties	Dust at sufficient concentrations can form explosive mixtures with air. Dust can be an explosion hazard when exposed to heat or flame.
Molecular Weight	121.76
Other Information	Semiconductor. Low thermal conductivity. Mohs hardness: 3-3.5.

10. Stability and reactivity

Chemical Stability	Stable at room temperature in closed containers under normal storage and handling conditions. Slightly or slowly tarnishes in moist air (not in dry air).
Conditions to Avoid	Excessive temperatures and heat, sparks, flames, or other sources of ignition, exposure to air and moisture and incompatible materials.
Incompatible Materials	Oxidizing agents, acids, nitric acid, ammonium nitrate, bromoazide, gaseous chlorine, liquid chlorine, fluorine, bromine, iodine, fused ammonium nitrate, bromoazide, chloric acid, chlorine monoxide gas, solid potassium permanganate + friction, halogenated acids, nascent (freshly formed) hydrogen, bromine trifluoride, chlorine trifluoride, alkali peroxides, nitrates, alkali nitrates + heating.
Hazardous Decomposition Products	Highly toxic fumes of stibine (SbH ₃), antimony/antimony oxides.
Possibility of hazardous reactions	Finely divided antimony will react violently with nitric acid, and fused ammonium nitrate. Fumes of antimony hydride may be released on contact with acids. Antimony will burn spontaneously in gaseous chlorine, fluorine or bromine. Reaction with iodine produces heat, which can cause flame or even explosions if quantities are great enough. Reaction with chloric acid may be explosive due to formation of explosive compounds. Contact with chlorine monoxide gas or bromoazide results in a violent explosion. Exposure to nascent hydrogen gives stibine (SbH ₃) which is extremely toxic. Reaction with liquid chlorine will ignite at 33 °C. Will ignite when ground with solid potassium permanganate. Potassium and sodium peroxides oxidize antimony with incandescence. Reaction with chlorine trifluoride is vigorous, producing flame. May react violently with bromine trifluoride, or alkali nitrates. Reacts violently with powdered metals.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 7000 mg/kg.
Ingestion	Harmful if swallowed. May cause severe digestive tract irritation with flushing, dry throat, blurred vision, stiff neck, abdominal pain, burning sensation, nausea, vomiting and diarrhoea. May cause slow pulse, low blood pressure, shallow breathing, coma, convulsions, and possible death.
Inhalation	Irritation possible to mucous membranes and respiratory tract. Causes nasal ulceration as fumes or dust, coughing, headache, dizziness, nausea, vomiting. May cause abdominal pain, burning sensation, diarrhoea, death. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.
Skin	Causes skin irritation, hair loss, dry skin, antimony spots (papules and pustules around sweat and sebaceous glands) and (rarely) dermatitis. May be harmful if absorbed through the skin.
Eye	Causes eye irritation. May cause conjunctivitis and keratitis.
Carcinogenicity	Not listed in the IARC Monographs. Antimony trioxide [1309-64-4] is evaluated in the IARC Monographs (Vol. 47; 1989) as Group 2B: Possibly carcinogenic to humans.
Reproductive Toxicity	Antimony has been found to cause premature births and spontaneous abortions in women, along with growth retardation in children. Russian studies have suggested that workers exposed to antimony have



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Chronic Effects shown sexual dysfunction in males and increased incidence of gynecological problems in females. Chronic effects due to antimony are alterations of the ECG, especially T-wave abnormalities, myocardial changes, pneumoconiosis, but also pneumonitis, tracheitis, laryngitis, bronchitis, pustular skin eruptions called antimony spots, and contact allergy to the metal. Causes dermatitis, keratitis, conjunctivitis and nasal ulceration by contact and as fumes or dust. Chronic exposure may cause dizziness, dry throat, sleepiness, anorexia, nausea, damage to blood, cardiovascular systems, mucous membranes, respiratory systems, liver, the nervous system or kidneys.

Mutagenicity No evidence of mutagenic properties.

12. Ecological information

Ecological Information No ecological problems are to be expected when the product is handled and used with due care and attention.

Ecotoxicity Toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Environmental Protection Do not allow to enter waters, waste water, or soil!

Acute Toxicity - Fish Mortality NOEC (Cyprinodon variegatus - sheepshead minnow): 6.2 mg/l/ 96h
LC50 (Cyprinodon variegatus - sheepshead minnow): 6.2 - 8.3 mg/l/ 96h

13. Disposal considerations

Disposal Considerations Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information Dangerous Goods of Class 6 (Toxic and Infectious Substances) are incompatible in a placard load with any of the following: -Class 1, Class 3, if the Class 3 dangerous goods are nitromethane, Class 8, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids; and are incompatible with food and food packaging in any quantity.

U.N. Number 2871

UN proper shipping name ANTIMONY, POWDER

Transport hazard class(es) 6.1

Hazchem Code 2X

Packaging Method 3.8.6.1

Packing Group III

EPG Number 6B3

IERG Number 29

15. Regulatory information

Poisons Schedule S6

16. Other Information

Literature References 'Standard for the Uniform Scheduling of Medicines and Poisons No. 15', Commonwealth of Australia, November 2016.
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Substances Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.



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Safety Data Sheet

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Contact

Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**

Person/Point

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Empirical Formula & Sb

Structural Formula

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