

Infosafe No™ 1CHJG	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
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 Product Name **MERCURIC SULFATE**

Classified as hazardous

1. Identification

GHS Product Identifier	MERCURIC SULFATE						
Company Name	CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)						
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia						
Telephone/Fax Number	Tel: (08) 8440-2000						
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)						
E-mail Address	www.chemsupply.com.au						
Recommended use of the chemical and restrictions on use	Calomel and corrosive sublimate, catalyst in the conversion of acetylene to acetaldehyde, extracting gold and silver from roasted pyrites, battery electrolyte, analytical chemistry and laboratory reagent.						
Other Names	<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Name</u></th> <th style="text-align: left;"><u>Product Code</u></th> </tr> <tr> <td>MERCURIC SULFATE AR</td> <td>MA084</td> </tr> <tr> <td>Mercury (II) sulfate, Mercury bisulfate, Mercury persulfate</td> <td></td> </tr> </table>	<u>Name</u>	<u>Product Code</u>	MERCURIC SULFATE AR	MA084	Mercury (II) sulfate, Mercury bisulfate, Mercury persulfate	
<u>Name</u>	<u>Product Code</u>						
MERCURIC SULFATE AR	MA084						
Mercury (II) sulfate, Mercury bisulfate, Mercury persulfate							

Other Information

ChemSupply Australia 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 ChemSupply Australia 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 ChemSupply Australia 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 - Acute Hazard: Category 1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1 Acute Toxicity - Dermal: Category 2 Acute Toxicity - Inhalation: Category 2 Acute Toxicity - Oral: Category 1 Specific target organ toxicity - Repeated Exposure Category 2
Signal Word (s)	DANGER
Hazard Statement (s)	H300 Fatal if swallowed. H310 Fatal in contact with skin. H330 Fatal if inhaled. H373 May cause damage to organs (kidneys) through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Pictogram (s)	Skull and crossbones, Health hazard, Environment



Precautionary statement – Prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P262 Do not get in eyes, on skin, or on clothing.
 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.

Infosafe No™ 1CHJG	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
--------------------	------------------------	-----------------------

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Precautionary statement – Response

P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Gently wash with plenty of soap and water.
P310 Immediately call a POISON CENTER or doctor/physician.
P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P391 Collect spillage.

Precautionary statement – Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary statement – Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Mercuric sulfate	7783-35-9	100 %

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately, avoid becoming a casualty. Make patient comfortable, keep warm and at rest until fully recovered. If breathing is difficult (or develops a bluish skin discolouration), supply oxygen by a qualified person. Apply artificial respiration with a respiratory medical device if not breathing. Do not use mouth to mouth resuscitation. Immediately medical attention is required.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek immediate medical advice.
Skin	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek medical attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek immediate medical assistance.
First Aid Facilities	Maintain eyewash fountain and drench facilities in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
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	May liberate toxic fumes in fire including mercury vapours, sulfur oxides.
Specific Methods	Small fire: Use dry chemical, CO2 or water spray. If safe to do so, move undamaged containers from fire area. Large fire: Use water spray, fog or foam - Do not use water jets. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.
Specific hazards arising from the chemical	Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. Runoff may pollute waterways.
Hazchem Code	2X
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

Infosafe No™ 1CHJG Issue Date : June 2021 RE-ISSUED by CHEMSUPP

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6. Accidental release measures

Spills & Disposal	Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Cover with plastic sheet to prevent spreading. Absorb with earth, sand or other non-combustible material and transfer to container. DO NOT GET WATER INSIDE CONTAINERS. 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.
Clean-up Methods - Large Spillages	Seek expert advice on handling and disposal.
Environmental Precautions	Avoid release to the environment.

7. Handling and storage

Precautions for Safe Handling	Adequate ventilation; Use of disposable uniforms, so that a contaminated uniform is not a source of absorption through the skin; Use of disposable mercury-vapor-absorbing masks; Careful attention to good housekeeping, eg, avoidance of spills, and prompt and proper cleaning if a spill occurs; All containers should be kept tightly closed; Floors should be washed on a regular basis with dilute calcium sulfide solution or other suitable reactant; Floors should be nonporous; All workers directly involved in the plant operation should shower thoroughly each day before leaving. Do not handle broken packages unless wearing appropriate personal protective equipment. Wash away any material which may have contacted the body with copious amounts of water or soap and water. If contact with the material anticipated, wear appropriate chemical protective clothing.
Conditions for safe storage, including any incompatibilities	Keep tightly closed, in a dry, well-ventilated place, away from incompatible substances. Keep well protected from light and moisture. Store under inert gas. Air sensitive. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room. Protect against physical damage. Isolate from any source of heat or ignition. Follow strict hygiene practices. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
Corrosiveness	Corrosive to Magnesium, Aluminium, Zinc, Iron, Lead, and Copper. Sulfate ion is corrosive to pipes and fittings.
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).
Unsuitable Materials	Aluminium, copper, iron, magnesium, lead, and zinc.

8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Mercuric sulfate			0.025	0.003	Mercury, inorganic divalent compounds (as Hg)
Other Exposure Information	These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to					

Infosafe No™ 1CHJG	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
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Appropriate engineering controls	as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity. A time weighted average (TWA) has been established for Mercury, inorganic divalent compounds (as Hg) (Safe Work Australia) of 0.025 mg/m ³ , (0.003 ppm) and for Mercury, elemental vapour (as Hg) (Safe Work Australia) of 0.025 mg/m ³ , (0.003 ppm). 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.
Respiratory Protection	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. 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	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Clean impervious clothing should be worn. 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	White crystals or powder.
Odour	Odourless.
Melting Point	Decomposes.
Boiling Point	Decomposes.
Solubility in Water	Insoluble in water. Decomposes.
Solubility in Organic Solvents	Insoluble in alcohol, acetone and ammonia. Soluble in acids.
Specific Gravity	6.47
Vapour Pressure	Negligible.
Evaporation Rate	Negligible.

Infosafe No™ 1CHJG	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
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Volatile Component	0% @ 21 °C
Flammability	Non combustible material.
Auto-Ignition Temperature	> 450 °C
Explosion Properties	Not considered to be an explosion hazard.
Molecular Weight	296.65
Solubility in other solvents (kg/m3)	Soluble in hydrochloric acid, hot dilute sulfuric acid, concentrated sodium chloride.

10. Stability and reactivity

Chemical Stability	Stable under normal temperatures and pressures. Light sensitive. Decomposes on exposure to light. Hygroscopic: absorbs moisture or water from the air. Water causes decomposition to a yellow insoluble basic sulfate and Sulfuric acid.
Conditions to Avoid	High temperatures, sources of ignition, incompatible materials, air, light, moisture.
Incompatible Materials	Substance decomposes when exposed to water, violently reacts with hydrogen chloride, and is corrosive to many metals (including aluminium, copper, iron, magnesium, lead, and zinc). Oxidizing agents. Incompatible with acetylene, ammonia, hydrogen halides + heat, and strong acids.
Hazardous Decomposition Products	Mercury vapour and sulfur oxides, oxides of mercury. Decomposed by water into a yellow insoluble basic sulfate and sulfuric acid.
Possibility of hazardous reactions	Absorption of gaseous hydrogen chloride on mercuric sulfate becomes violent at 125 °C. Reacts with water.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 25 mg/kg.
Acute Toxicity - Dermal	LD50 (rat): 625 mg/kg.
Ingestion	Fatal if swallowed. Average lethal dose for inorganic mercury salts is about 1 gram. May cause burning of the mouth and pharynx, abdominal pain, vomiting, corrosive ulceration, bloody diarrhoea. May be followed by a rapid and weak pulse, shallow breathing, paleness, exhaustion, central nervous system problems, tremors, and collapse. Delayed death may occur from renal failure. Symptoms may be parallel to inhalation.
Inhalation	Fatal if swallowed. Inhalation of the material causes irritation to the respiratory tract by damaging the mucous membranes, experiencing symptoms such as nausea, headache, and shortness of breath, coughing, metallic taste, and vomiting, abdominal pain. Bloody diarrhoea, intestinal burns, glottal oedema (swelling of fluid in the soft tissues of the larynx), aspiration pneumonia, as well as a drop in blood pressure, cardiac dysrhythmia (irregular heartbeat), circulatory collapse, and renal failure.
Skin	Fatal in contact with skin. Symptoms include redness and pain. May cause burns. Risk of skin sensitization. Can be absorbed through the skin with symptoms to parallel ingestion.
Eye	Contact may cause severe eye irritation and burns to eyes. Symptoms include redness, pain, blurred vision; may cause serious and permanent eye damage.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Mercury [7439-97-6] and inorganic mercury compounds are evaluated in the IARC Monographs (Vol. 58;1993) as Group 3: Not classifiable as to carcinogenicity to humans.

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Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Specific target organ toxicity - Repeated Exposure Category 2 (Kidney) H373 May cause damage to organs (kidney) through prolonged or repeated exposure.
Chronic Effects	Chronic exposure through any route can produce central nervous system damage. May cause muscle tremors, personality and behaviour changes, CNS effects (impaired speech, vision, hearing, and sensitivity, loss of memory, irritability, hallucinations, delirium inter alia), metallic taste, loosening of the teeth, digestive disorders, skin rashes, brain damage and kidney damage. Can cause skin allergies and accumulate in the body. Repeated skin contact can cause the skin to turn gray in colour.
Mutagenicity	Not classified based on available information.

12. Ecological information

Ecotoxicity	Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Persistence and degradability	Methods for the determination of biodegradability are not applicable to inorganic substances.
Environmental Fate	Inorganic mercury sources can be converted to the more dangerous organic forms by microorganisms in air, water, and soil.
Bioaccumulative Potential	Concentration in organisms possible. Bioaccumulation of mercury may occur in aquatic settings. For mercury: This material has an experimentally-determined bioconcentration factor (BCF) of greater than 100. This material is expected to significantly bioaccumulate.
Environmental Protection	Do not allow to enter waters, waste water, or soil!

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.
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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	1645
UN proper shipping name	MERCURY SULFATE
Transport hazard class(es)	6.1
Hazchem Code	2X
Packing Group	II
EPG Number	6A5
IERG Number	34
Environmental Hazards	Highly toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment. Concentration in organisms possible.

15. Regulatory information

Regulatory Information	All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS), or exempted. Not listed under WHS Regulation
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Infosafe No™ 1CHJG	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
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Poisons Schedule

2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

S7

16. Other Information

**Literature
References**

'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.
Safe Work Australia, 'Hazardous Chemical Information System'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

Contact Person/Point

Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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**Empirical Formula
& Structural
Formula**

HgSO₄

...End Of MSDS...

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