

Infosafe No™ 1CH4C	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
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 Product Name **MERCURIC CHLORIDE**

Classified as hazardous

1. Identification

GHS Product Identifier	MERCURIC CHLORIDE				
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	Manufacture of calomel and other mercury compounds, disinfectant, organic synthesis, metallurgy, tanning, catalyst for vinyl chloride, sterilant for seed potatoes; fungicide, insecticide, wood preservative; embalming fluids, textile printing, dry batteries, photography, process engraving, lithography, electroplating aluminium, analytical and laboratory reagent.				
Other Names	<table border="0" style="width: 100%;"> <tr> <td style="width: 60%;"><u>Name</u></td> <td style="width: 40%;"><u>Product Code</u></td> </tr> <tr> <td>MERCURIC CHLORIDE AR Mercury (II) chloride, Mercury bichloride, Mercury dichloride</td> <td>MA047</td> </tr> </table>	<u>Name</u>	<u>Product Code</u>	MERCURIC CHLORIDE AR Mercury (II) chloride, Mercury bichloride, Mercury dichloride	MA047
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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 Germ Cell Mutagenicity: Category 2 Acute Toxicity - Oral: Category 2 Specific target organ toxicity - Repeated Exposure Category 1 Skin Corrosion/Irritation: Category 1B Toxic to Reproduction: Category 2
Signal Word (s)	DANGER
Hazard Statement (s)	H300 Fatal if swallowed. H314 Causes severe skin burns and eye damage. H341 Suspected of causing genetic defects. H361 Suspected of damaging fertility. H372 Causes damage to organs (kidneys) through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Pictogram (s)	Skull and crossbones, Corrosion, Health hazard, Environment



Infosafe No™ 1CH4C	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
--------------------	------------------------	-----------------------

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Precautionary statement – Prevention	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>P264 Wash thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P281 Use personal protective equipment as required.</p>
Precautionary statement – Response	<p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P391 Collect spillage.</p>
Precautionary statement – Storage	<p>P405 Store locked up.</p>
Precautionary statement – Disposal	<p>P501 Dispose of contents/container to an approved waste disposal plant.</p>

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Mercuric chloride	7487-94-7	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. DO NOT INDUCE VOMITING. OBTAIN MEDICAL ATTENTION IMMEDIATELY.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Contaminated clothing must be laundered before re-use. Seek medical attention.
Eye contact	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical assistance.
First Aid Facilities	Maintain eyewash fountain and safety shower 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 at once.

5. Fire-fighting measures

Suitable extinguishing media	Use appropriate fire extinguisher for surrounding environment. No limitations to the type of extinguishing media.
Hazards from Combustion Products	May liberate toxic fumes in fire including: halogen, toxic fumes of mercury, chloride fumes, hydrochloric acid.

Infosafe No™ 1CH4C	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
--------------------	------------------------	-----------------------

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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 dry chemical, CO2, foam or water spray - 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. Containers may explode when heated. Some may ignite combustibles (wood, paper, clothing, etc.) Contact with metals may evolve flammable hydrogen gas.
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.

6. Accidental release measures

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.

7. Handling and storage

Precautions for Safe Handling	Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Under no circumstances eat, drink or smoke while handling this material. Wash hands and face thoroughly after working with material. Contaminated clothing should be removed and washed before reuse. Avoid generation or accumulation of dusts. All metallic jewellery must be removed.
Conditions for safe storage, including any incompatibilities	Store in well ventilated area. Store away from foodstuffs. Keep containers securely sealed and protected against physical damage. Keep container tightly closed and dry, away from direct sunlight and other sources of heat or ignition.
Storage Regulations	Refer Australian Standard AS/NZS 4452:1997 'The storage and handling of toxic substances'.
Storage Temperatures	23 °C Maximum.
Unsuitable Materials	Due to the possibility of formation of amalgams, metallic containers should not be used.

8. Exposure controls/personal protection

Occupational exposure limit values	<u>Name</u>	STEL		TWA		<u>Footnote</u>
		<u>mg/m3</u>	<u>ppm</u>	<u>mg/m3</u>	<u>ppm</u>	
	Mercuric chloride			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 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/m³, (0.003 ppm) and for Mercury, elemental vapour (as Hg) (Safe Work Australia) of 0.025 mg/m³, (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

Infosafe No™ 1CH4C	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
--------------------	------------------------	-----------------------

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Appropriate engineering controls	working day for a 5 day working week. 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	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 skincontact 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	276 - 281 °C (Sublimes)
Boiling Point	302 °C (Sublimes)
Solubility in Water	Soluble (74 g/L @ 20 °C).
Solubility in Organic Solvents	Soluble in alcohol, ether, pyridine, glycerol and acetic acid.
Specific Gravity	5.44 at 25 °C
pH	3 (50g/l H ₂ O)
Vapour Pressure	0.1 hPa @ 100°C
Vapour Density (Air=1)	8.7
Volatile Component	0%
Flammability	Non combustible material.
Explosion Properties	Explosive conditions are created by friction, heat, or impact with phosphorus, antimony, arsenic, silver salts, sulfides, acetylene, ammonia and oxalic acid.

Infosafe No™ 1CH4C	Issue Date : June 2021	RE-ISSUED by CHEMSUPP
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Mixture with potassium and metallic halides produces strong explosion on impact. Mixture with sodium and halide compounds produces a strong explosion on impact.

Molecular Weight 271.50

10. Stability and reactivity

Chemical Stability Stable under ordinary conditions of use and storage. Decomposes on exposure to light.

Slowly decomposes to metallic Hg in the presence of organic matter and sunlight, and becomes volatile at 300 °C. Sensitive to moisture.

Conditions to Avoid Light, dust generation, excess heat, incompatible materials, organic matter, moisture, shock and friction.

Incompatible Materials Oxidizing agents, metals, acids, alkalis, alkali metals, heavy metals, halogens, ammonia, copper, iron, silver salts, potassium, antimony, sodium, lead, hypophosphites, formates, sulfates, sulfites, sulfides, phosphates, phosphites, albumin, gelatin, alkaloid salts, lime water, arsenic, bromides, borax, carbonates, reduced iron, infusions of cinchona, columbo, oak bark or senna, tannic acid, metallic halides, metallic salts, vegetable astringents.

Hazardous Decomposition Products Oxides of the contained metal and halogen, possibly also free, or ionic halogen, toxic fumes of mercury, chloride fumes, hydrochloric acid.

Possibility of hazardous reactions Reacts violently with sodium, potassium and their alloys. Fluorine.

Hazardous Polymerization Will not occur.

11. Toxicological Information

Ingestion Highly Toxic! 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.

Inhalation Causes irritation to the respiratory tract. Symptoms include sore throat, coughing, pain, tightness in chest, breathing difficulties, shortness of breath and headache. Pneumonitis may develop. Can be absorbed through inhalation with symptoms to parallel 'Ingestion'. Vapour inhalation can burn the mucous membrane of the nose and throat.

Skin Causes irritation and burns to skin. Symptoms include redness and pain. May cause skin allergy and sensitization. Can be absorbed through the skin with symptoms to parallel 'Ingestion'.

Eye Causes irritation and burns to eyes. Symptoms include redness, pain, blurred vision; may cause serious and permanent eye damage. Contact with mercury or mercury compounds can cause ulceration of the conjunctiva and cornea. Exposure to mercury or mercury compounds can cause discolouration on the front surface of the lens, which does not interfere with vision.

Respiratory sensitisation Not classified based on available information.

Skin Sensitisation Not classified based on available information.

Germ cell mutagenicity Germ Cell Mutagenicity: Category 2
H341 Suspected of causing genetic defects.

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.

Not classified based on available information.

Reproductive Toxicity Toxic to Reproduction: Category 2
H361 Suspected of damaging fertility.

STOT-single exposure Not classified based on available information.

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STOT-repeated exposure	Specific target organ toxicity - Repeated Exposure Category 1 H372 Causes damage to organs (kidneys) through prolonged or repeated exposure.
Chronic Effects	Chronic exposure through any route can produce central and peripheral nervous system damage. May cause muscle tremors, personality and behavior changes, ataxia, sensory and memory disturbances, fatigue, muscle weakness, metallic taste, loosening of the teeth, digestive disorders, skin rashes, dermatitis, 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.
Serious eye damage/irritation	Skin Corrosion/Irritation: Category 1B H314 Causes severe skin burns and eye damage.
Mutagenicity	Not classified based on available information.
Skin corrosion/irritation	Skin Corrosion/Irritation: Category 1B H314 Causes severe skin burns and eye damage.
Human Effects	Mercury compounds have a cytotoxic and protoplasmatoxic effect.
Other Information	Mercuric chloride is one of the most toxic forms of mercury because it easily forms organomercury complexes with proteins.

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.
Bioaccumulative Potential	Very highly bioaccumulative. BCF: 10000 - 40000.
Environmental Protection	Do not allow to enter waters, waste water, or soil!
Other Information	The toxicity of mercury (II) ions for water organisms depends on the water hardness.

13. Disposal considerations

Disposal Considerations	Dispose 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	1624
UN proper shipping name	MERCURIC CHLORIDE
Transport hazard class(es)	6.1
Hazchem Code	2X
Packing Group	II
EPG Number	6A5
IERG Number	37
Environmental Hazards	Highly toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment. Has the potential to bioaccumulate.

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 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
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Infosafe No™ 1CH4C Issue Date : June 2021 RE-ISSUED by CHEMSUPP

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Poisons Schedule 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 HgCl₂

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