

Infosafe No™ 1CH4D Issue Date : October 2021 RE-ISSUED by CHEMSUPP

Product Name **MERCURIC OXIDE**

Classified as hazardous

1. Identification

GHS Product Identifier MERCURIC OXIDE

Company Name CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)

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Recommended use of the chemical and restrictions on use Laboratory reagent, analytical reagent, catalyst in Kjeldahl determinations of nitrogen, anti-fouling paints, paint pigment, ceramics (pigment), perfumery, cosmetics, pharmaceuticals for topical disinfection, antiseptic, dry batteries, chemicals, polishing compound and fungicide.

Other Names	<u>Name</u>	<u>Product Code</u>
	MERCURIC OXIDE Red AR	MA050
	Mercury (II) oxide red, Mercury oxide red, Red precipitate	
	MERCURIC OXIDE Yellow	MA140
	Mercury (II) Oxide Yellow, Yellow precipitate	

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 (Kidney) 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



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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. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 Wear respiratory protection.
Precautionary statement – Response	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P330 Rinse mouth. P302+P350 IF ON SKIN: Gently wash with plenty of soap and water. 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. P361 Remove/Take off immediately all contaminated clothing. P363 Wash contaminated clothing before reuse. 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.
Other Information	Danger of cumulative effects.

3. Composition/information on ingredients

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Mercuric oxide red	21908-53-2	100 %
	Mercuric oxide yellow	21908-53-2	100 %

4. First-aid measures

Inhalation	Remove victim to fresh air. Keep warm and at rest. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen. Seek urgent medical assistance.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. 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 immediate medical advice.
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. Antidote: The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel.
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

Hazards from Combustion Products	Mercury vapours, mercury oxides, oxygen, oxides of carbon.
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.
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.

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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 Take off immediately all contaminated clothing. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms. Evacuate the area of all non-essential personnel.

Personal Protection Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

Clean-up Methods - Large Spillages Seek expert advice on handling and disposal.

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. Only use in well-ventilated areas. Avoid generation or accumulation of dusts. Avoid using metal tools.

Conditions for safe storage, including any incompatibilities Store away from organic materials. Store away from foodstuffs. Keep containers securely sealed and protected against physical damage. Keep container tightly closed in a dry, well-ventilated place away from direct sunlight and other sources of heat or ignition. Separate from incompatibles, combustibles, or other readily oxidizable materials. This product should not be stored on wooden floors. Do not use or store on porous work surfaces (wood, unsealed concrete, etc.). Keep away from light. Store in light resistant containers. Follow strict hygiene practices. Containers of this material may be hazardous when empty since they retain product residues (dusts, solids). Observe all warnings and precautions listed for the product. Store at room temperature (15 - 25 °C).

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

8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Mercuric oxide red			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 working day for a 5 day working week.

Appropriate engineering controls 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

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	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	Heavy, bright red or orange-red powder, yellow when finely powdered.
Odour	Odourless.
Melting Point	500 °C (decomposition)
Solubility in Water	Immiscible or insoluble (0.053 g/L at 25 °C).
Solubility in Organic Solvents	Insoluble in alcohol, ether, acetone. Soluble in most acids, organic and inorganic, but the yellow form is more reactive and dissolves more readily.
Specific Gravity	11.1
pH	pH 6-7 (5g/l at 20°C, slurry)
Volatile Component	0%
Explosion Properties	Not considered to be an explosion hazard. Decomposes at melting point and can then react violently with shock, friction, or heat.
Molecular Weight	216.59
Other Information	Soluble in dilute hydrochloric acid and nitric acid. Soluble in solutions of alkali cyanides and iodides. Slowly soluble in solutions of alkali bromides.

10. Stability and reactivity

Chemical Stability	Stable at room temperature in closed containers under normal storage and handling conditions. Light-sensitive. Decomposes on exposure to light into mercury and oxygen. At 400 °C becomes almost black but red again on cooling.
Conditions to Avoid	Incompatible materials, dust generation, excess heat, light.
Incompatible Materials	Alcohols, nitrates, halogens, semimetallic halides, hydrazine and derivatives, light metals/heat, nonmetals/heat, nonmetallic hydrogen compounds, hydrogen

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Hazardous Decomposition Products	peroxide/nitric acid, reducing agents, ozone, strong oxidizing agents, chlorine, hypophosphorus acid, iodine + methyl and ethyl alcohol, magnesium, phospham, phosphorus, sodium + potassium, sulfur, easily oxidized materials, phosphinic acid, combustible materials, organic materials, amines, phenol, alloy, acetyl nitrate, butadiene, hydrocarbons, sulfur chloride, methanethiol.
Possibility of hazardous reactions	Reacts violently with chlorine, hydrazine hydrate, hydrogen peroxide, hypophosphorus acid, magnesium, phosphorus, sulfur and reducing materials. Mercury forms amalgams with many metals.
Hazardous Polymerization	Has not been reported.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 18 mg/kg.
Acute Toxicity - Dermal	LD50 (rat): 315 mg/kg.
Ingestion	Fatal if swallowed. 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 inhaled. 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	Causes severe eye irritation. May cause eye burns. May cause eye injury. Contact with eyes causes severe lesions.
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. Not classified based on available information.
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 (Kidney) Category 2 H373 May cause damage to organs (kidneys) 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.
Serious eye damage/irritation	Not classified based on available information.

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Respiratory Irritation Not classified based on available information.

Skin corrosion/irritation 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.

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.

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 1641

UN proper shipping name MERCURY OXIDE

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.

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.

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:**
All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change

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**Empirical Formula
& Structural
Formula**

HgO

...End Of MSDS...

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