

Infosafe No™ 1CHBS Issue Date : May 2021 RE-ISSUED by CHEMSUPP

Product Name **LEAD IODIDE**

Classified as hazardous

1. Identification

GHS Product Identifier LEAD IODIDE

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

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Recommended use of the chemical and restrictions on use Bronzing, printing, photography, thermoelectric materials, cloud seeding, gold pencils, mosaic gold and laboratory reagent.

Other Names

<u>Name</u>	<u>Product Code</u>
LEAD IODIDE LR	LL011
Lead (II) Iodide	

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 Acute toxicity - Oral: Category 4
Acute toxicity - Inhalation: Category 4
Carcinogenicity: Category 2
Germ cell mutagenicity: Category 2
Specific target organ toxicity (repeated exposure): Category 1
Reproductive toxicity: Category 1A
Short-term (acute) aquatic hazard: Category 1
Long-term (chronic) aquatic hazard: Category 1

Signal Word (s) DANGER

Hazard Statement (s) H302 Harmful if swallowed.
H332 Harmful if inhaled.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H360Df May damage the unborn child. Suspected of damaging fertility.
H372 Cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s) Health hazard, Exclamation mark, Environment



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Precautionary statement – Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe 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.
P281 Use personal protective equipment as required.

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.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.
P405 Store locked up.

Precautionary statement – Storage

Precautionary statement – Disposal

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

3. Composition/information on ingredients

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Lead Iodide	10101-63-0	100 %

4. First-aid measures

Inhalation If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Wash contaminated clothing before re-use. Seek medical advice.

Eye contact Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical attention.

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.

5. Fire-fighting measures

Hazards from Combustion Products Irritating and toxic fumes and gases. Hydrogen iodide, lead oxides.

Specific Methods No limitations to the type of extinguishing media. Use extinguishing media most appropriate for the surrounding fire.
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.

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.

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6. Accidental release measures

Personal Precautions	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.
Environmental Precautions	Prevent from entering into drains, ditches, rivers or the sea.

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. Contaminated clothing should be removed and washed before reuse. Use with adequate ventilation. Avoid ingestion and inhalation of material.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed and dry, away from direct sunlight. Keep in a cool place Store away from foodstuffs.
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	<u>Name</u>	STEL		TWA		<u>Footnote</u>
		<u>mg/m3</u>	<u>ppm</u>	<u>mg/m3</u>	<u>ppm</u>	
	Lead Iodide			0.15		Lead, inorganic dusts & fumes (as Pb)
Other Exposure Information	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. 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.					
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 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.					

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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 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. Wash hands, forearms, face and neck before exiting restricted area. Launder contaminated clothing before re-use.

9. Physical and chemical properties

Form	Solid
Appearance	Yellow to orange powder or crystals.
Odour	Odourless.
Melting Point	402 °C
Boiling Point	954 °C
Solubility in Water	Very slightly soluble in cold water.
Solubility in Organic Solvents	Insoluble in alcohol.
Specific Gravity	6.16
Vapour Pressure	1 mmHg (479 °C)
Flammability	Non combustible material.
Molecular Weight	461.0
Other Information	Soluble in potassium iodide and concentrated sodium acetate solutions.

10. Stability and reactivity

Chemical Stability	Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid	Incompatible materials, light, dust generation, excess heat, strong oxidants.
Incompatible Materials	Oxidising agents (such as perchlorates, peroxides, permanganates, chlorates, nitrates, chlorine, bromine and fluorine).
Hazardous Decomposition Products	Irritating and toxic fumes and gases, hydrogen iodide, lead/lead oxides.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Harmful if swallowed. May cause moderate to severe gastrointestinal tract irritation with abdominal pain and spasms, nausea, vomiting, headache and diarrhoea. Symptoms of ingestion of a very large dose over a short time period may include headache, fatigue, nausea, abdominal cramps, and joint pain. Acute poisoning can cause or lead to vomiting and constipation or bloody diarrhoea, joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), depression, 'lead line' on the gums, metallic taste in the mouth, definite loss of appetite, insomnia, dizziness, possible convulsions, high lead levels in blood and urine with shock, coma and death in extreme cases. May affect behaviour/brain, metabolism, liver, cardiovascular system, urinary system, and blood. Exposure may cause anaemia and other blood abnormalities.
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High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. The following applies to lead compounds in general: due to the poor absorbability via the gastrointestinal tract, only very high doses lead to acute cases of intoxication.

Inhalation

Harmful if inhaled. Inhalation of dusts may cause irritation of the nose, throat and respiratory system (local irritation of the bronchia, and lungs). Symptoms such as metallic taste, chest and abdominal pain, and increased lead blood levels may follow. Effects such as headache, fatigue, joint pain, nausea, vomiting, abdominal cramps and constipation or bloody diarrhoea may occur upon inhalation of large amounts. Lead can be absorbed through the respiratory system. See symptoms of ingestion. Lead accumulates in the body and inorganic lead compounds are well known to cause significant health effects following chronic exposure. If a significant amount of lead has accumulated in the body, symptoms of long-term toxicity may develop after what may seem to be a short-term acute exposure. See Chronic Effects.

Skin

Inorganic lead compounds are not known to cause skin irritation and are poorly absorbed through the skin. Open cuts, abraded or irritated skin should not be exposed to this material. Contact over short periods may cause local irritation, redness and pain. May be harmful if absorbed through the skin on prolonged exposure. See symptoms for ingestion.

Eye

Concentrated solutions or high levels of dust or fumes may cause eye irritation or abrasion, with redness, tearing, stinging, blurred vision, temporary impairment of vision and/or other transient eye damage/ulceration. Absorption may occur through eye tissues.

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

Lead compounds, inorganic is evaluated in the IARC Monographs (Vol. 87; in preparation) as Group 2A: Probably carcinogenic to humans.
Carcinogenicity - Category 2
H351 Suspected of causing cancer.

Reproductive Toxicity

Reproductive toxicity - Category 1A
H360Df May damage the unborn child. Suspected of damaging fertility.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Specific target organ toxicity (repeated exposure) - Category 1
H372 Causes damage to organs through prolonged or repeated exposure

Chronic Effects

Lead is a cumulative poison and exposure even to small amounts can raise the body's content to toxic levels. Long-term health effects of inorganic lead compounds, including lead acetate, are similar following inhalation or ingestion. Long-term lead toxicity is commonly referred to as 'plumbism' and may include effects on the nervous system (forgetfulness, irritability, tiredness, headache, fatigue, impotence, decreased libido, dizziness, depression, encephalopathy, behavioural effects, altered mood states, disturbances in hand-eye coordination, reaction times, visual motor performance, and mental performance, disturbances to vision, changes in hearing, weakness of the arms and legs and weakness and paralysis of the wrist, fingers and ankles, decreased hand dexterity, footdrop and wristdrop), heart/blood vessels (reduced haemoglobin production and reduced life span and function of red blood cells, anaemia, increased blood pressure), digestive system (loss of appetite, inflammation of the stomach walls (gastritis) and colic, with severe abdominal pain, cramps, nausea, vomiting, constipation, anorexia (loss of appetite), weight loss and decreased urination, deposition of blue lead-line on the gums), kidneys/urinary system (reversible/irreversible kidney damage) and endocrine system.

Subchronic/Chronic Toxicity

Repeated exposure to lead has caused many toxic effects including: neurological changes, kidney damage, and blood abnormalities.

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12. Ecological information

Ecological Information	Harmful to the environment.
Ecotoxicity	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Hazard for drinking water supplies.
Persistence and degradability	Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Toxicity of the Products of Biodegradation: The products of degradation are more toxic.
Environmental Fate	Lead is a naturally occurring element. It does not break down in soil or water but lead compounds are changed by sunlight, air and water. If released to the air from industry or burning of fossil fuels or waste, lead may remain airborne for about 10 days, depending on weather conditions. Lead will stay in soil, dust and sediments for many years.
Biological Properties	Because lead does not break down and is highly persistent in water, it is expected that fish tissues will contain lead from polluted waters.
Other Precautions	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	2291
UN proper shipping name	LEAD COMPOUND, SOLUBLE, N.O.S.
Transport hazard class(es)	6.1
Hazchem Code	2X
Packing Group	III
EPG Number	6B5
IERG Number	34
Environmental Hazards	Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment. Dangerous for the 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	S6

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.
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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**

PbI₂

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