Infosafe No™	1CH9G	Issue Date : August 2018	RE-ISSUED by CHEMSUPP

Product Name : **LEAD (II) CHLORIDE**

Classified as hazardous

1. Identification

GHS Product Identifier	LEAD (II) CHLORIDE
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
(24 hour a day available)	CHEMCALL: 1800 127 406 (Australia) / +64-4-917-9888 (International)
Recommended use of the chemical and restrictions on use	Preparation of lead salts, lead chromate pigments, analytical reagent and laboratory reagent.

Other Names

Name	Product Code
LEAD (II) CHLORIDE LR	LL012

Other Information

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

Acute Toxicity - Inhalation: Category 4
Acute Toxicity - Oral: Category 4
Specific target organ toxicity - Repeated Exposure Category 1
Toxic to Reproduction: Category 1A
Carcinogenicity: Category 2
Germ Cell Mutagenicity: Category 2
Hazardous to the Aquatic Environment - Acute Hazard: Category 1
Hazardous to the Aquatic Environment - Long-Term 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.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs (Central nervous system, Blood, Kidneys) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s)

Health hazard, Exclamation mark, Environment



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/mist/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.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response	P281 Use personal protective equipment as required. P301+P312+P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. 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.
Precautionary statement – Storage	P405 Store locked up.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical Characterization Solid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase
Lead chloride	7758-95-4	100 %		

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. If breathing is difficult, give oxygen. 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. Seek immediate medical advice.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open.In all cases of eye contamination it is a sensible precaution to seek medical advice.
First Aid Facilities	Eye wash fountains and safety showers should be available for emergency use.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Protection for First Aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Most important symptoms/effects, acute and delayed	Lead compounds can accumulate in the body and cause significant long-term health effects. Medical advice should be sought following any exposure.
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 gases, fumes and vapours, including very toxic lead/lead oxide, hydrogen chloride gas, hydrochloric acid, basic chlorides and chloride fumes.
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.
Hazchem Code	2Z

6. Accidental release measures

Personal Precautions	Avoid inhalation, contact with skin, eyes and clothing. 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 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	Do not discharge into drains, surface water or ground water. Do not discharge to subsoil/soil.

7. Handling and storage

Precautions for Safe Handling
Avoid ingestion and inhalation of dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Minimize dust generation and accumulation. Keep locked up. Keep containers closed when not in use. Use only 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. Contaminated clothing should be removed and washed before re-use. Wash hands and face thoroughly after working with material. Under no circumstances eat, drink or smoke while handling this material.

Conditions for safe storage, including any incompatabilities
Toxic materials should be stored in a separate safety storage cabinet or room. Store in tightly closed containers, in a cool, dry, ventilated area away from incompatible materials. Keep apart from oxidising agents. Store away from foodstuffs. Protect against physical damage, direct sunlight and moisture. Areas in which exposure to lead metal or lead compounds may occur should be identified by signs or appropriate means, and access to the area should be limited to authorized persons.

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

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Lead chloride			0.15		Lead, inorganic dusts & fumes (as Pb)

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 Lead, inorganic dusts & fumes (as Pb) (Safe Work Australia) of 0.15 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: Nitrile rubber gloves 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 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	White to off-white, fine crystalline powder.
Odour	Odourless.
Melting Point	501 °C.
Boiling Point	950 °C.
Solubility in Water	10.8 g/L at 20°C
Solubility in Organic Solvents	Soluble in ammonium salts and alkali hydroxide; slightly soluble in dilute hydrochloric acid and in ammonia; slowly soluble in glycerol; insoluble in alcohol.
Specific Gravity	5.85.
Vapour Pressure	1 mmHg (547 °C).
Flammability	Non combustible material.
Explosion Properties	Not considered to be an explosion hazard. Interaction with calcium is explosive on warming.
Molecular Weight	278.10.
Other Information	Index of refraction: 2.199, 2.217, 2.260. Bulk Density: approx. 2900 kg/m³ (498 °C). Upon heating in air, readily forms basic chlorides.

10. Stability and reactivity

Chemical Stability	Stable under ordinary temperatures, pressures and conditions of use and storage.
Conditions to Avoid	Heat, flames and other ignition sources, dust generation and incompatible materials.
Incompatible Materials	Alkali metals, alkaline earth metals (calcium + warming), strong oxidizing agents, acids.
Hazardous Decomposition Products	Toxic gases, fumes and vapours, including very toxic lead/lead oxide, hydrogen chloride gas, hydrochloric acid, basic chlorides and chloride fumes.
Possibility of hazardous reactions	Reaction with calcium is explosive when heated slightly.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Toxicology Information	This substance should be treated with great care. NICNAS: Sparingly-soluble lead salts: Human health tier II assessment
Acute Toxicity - Oral	LD50 (rat): > 1947 mg/kg (CAS# 7758-95-4) (RTECS)
Ingestion	Harmful if swallowed. Causes irritation of the gastrointestinal system. May cause metallic taste, nausea, vomiting, diarrhoea, and colics after a latency period of several hours, in many instances followed by shock. 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. Excessive exposure to lead salts can affect blood forming organs, kidneys and nervous and digestive systems. The synthesis of haemoglobin is inhibited and results in anaemia. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. Additional symptoms of overexposure include: joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, blue line on the gums, insomnia, and metallic taste. High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death.
Inhalation	Harmful by inhalation. May cause respiratory tract irritation. May cause similar effects as for swallowing.
Skin	May cause skin irritation. May be harmful if absorbed through the skin.
Eye	May cause eye irritation, with inflammation.
Germ cell mutagenicity	Germ Cell Mutagenicity: Category 2
Carcinogenicity	Lead compounds, inorganic are evaluated in the IARC Monographs (Vol. 87; 2006) as Group 2A: Probably carcinogenic to humans.

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Reproductive Toxicity	Toxic to Reproduction: Category 1A
STOT-repeated exposure	Specific target organ toxicity - Repeated Exposure Category 1
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 chloride, 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.
Mutagenicity	Mutagenic effects have occurred in experimental animals.
Other Information	Potential for Accumulation: Inorganic lead compounds are absorbed into the body following inhalation or ingestion. Inorganic lead compounds are poorly absorbed through the skin. Once absorbed, inorganic lead compounds are distributed throughout the body. They can readily cross the placenta, reaching the unborn child. The majority of absorbed lead is excreted in the urine and faeces. Small amounts are also excreted in sweat, hair, fingernails and breast milk. Some lead is not excreted, but is stored in the bones and accumulates in the body. It can take more than 20 years for half of the inorganic lead in the bones to be removed from the body after the last exposure to lead. Lead which is released from the bones can cause health effects, even if there is no current exposure to lead. In some cases, lead can be rapidly released from the bones because of fractures, infections or other stresses on the body.

12. Ecological information

Ecological Information	NICNAS: Water soluble lead(2+) salts: Environment tier II assessment
Ecotoxicity	Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment. The following applies to lead compounds in general: Hazard for drinking water.
Short Summary of Assessment of Environmental Impact	Hazardous to the Aquatic Environment - Acute Hazard: Category 1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
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 handled as hazardous waste and 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	2291
UN proper shipping name	LEAD COMPOUND, SOLUBLE, N.O.S.
Transport hazard class(es)	6.1
Hazchem Code	2Z
Packaging Method	3.8.6.1
Packing Group	III
EPG Number	6B5

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15. Regulatory information

Regulatory Information Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Poisons Schedule S6

Packaging & Labelling

16. Other Information

Literature References

'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
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 fot 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]'.

Contact Person/Point

Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:
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Empirical Formula & Structural Formula $PbCl_2$.

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