Safety Data Sheet

Infosafe No™ 1CH3O Issue Date : August 2018 RE-ISSUED by CHEMSUPP

Product Name : **LEAD ACETATE**

Classified as hazardous

1. Identification

GHS Product Identifier	LEAD ACETATE
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	Used in the preparation of basic lead carbonate, lead chromate and lead salts of higher fatty acids; as a mordant in cotton dyes; as a water repellant; as a component in combined toning and fixing baths for daylight printing papers and for treating awnings and outdoor furniture to prevent removal of mildew and rot-proofing agents by rain or laundering; used in the preparation of rubber antioxidants; as a processing agent in the cosmetic, perfume and toiletry industries; as a component of colouring agents for adhesives; antifouling paints; and in the preparation of organic lead soaps used as driers of paints, varnishes and inks; gold cyanidation process; insecticide; analytical reagent; hair dye; lead coating for metals; weighting silks; and laboratory reagent.

Other Names

Name	**Product Code**
LEAD ACETATE Trihydrate AR	LA030
LEAD (II) ACETATE	
Sugar of lead	

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	Toxic to Reproduction: Category 1A Specific target organ toxicity - Repeated Exposure Category 2 Acute Toxicity - Inhalation: Category 4 Acute Toxicity - Oral: Category 4 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1 Hazardous to the Aquatic Environment - Acute Hazard: Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H360 May damage fertility or the unborn child. H302 Harmful if swallowed. H332 Harmful if inhaled. H373 May 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



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. 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. 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.
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 (II) Acetate Trihydrate	6080-56-4	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. Consult a physician.
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	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek immediate medical advice /attention depending on the severity.
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.
Most important symptoms/effects, acute and delayed	Lead acetate 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

Suitable extinguishing media	Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Hazards from Combustion Products	Acrid smoke, irritating or toxic and corrosive fumes (or gases), including lead or lead oxides, acetic acid, carbon monoxide and carbon dioxide.
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
Decomposition Temp.	> 200 °C.

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 Prevent from entering into drains, ditches, rivers or the sea. Avoid release to the environment.

7. Handling and storage

Precautions for Safe Handling Avoid ingestion and inhalation of dusts. Avoid contact with skin, eyes and clothing. Avoid prolonged or repeated exposure. Minimize dust generation and accumulation. 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. Wash thoroughly after handling. Contaminated clothing should be removed and washed before re-use. Avoid exposure of (pregnan) women! Ensure a high level of personal hygiene is maintained when using this product. Under no circumstances eat, drink or smoke while handling this material. Keep away from incompatibles chemicals.

Conditions for safe storage, including any incompatabilities Store in original, labelled, tightly closed containers, in a cool, dry, well-ventilated area away from incompatible substances. Separated from bromates, carbonates, phosphates, phenols, food and feedstuffs, oxidising agents, soluble sulfates, citrates, tartrates, chlorides, alkalies, tannin, resorcinol, salicylic acid, chloral hydrate, sulfites, vegetable infusions, tinctures. May decompose on exposure to light. Absorbs carbon dioxide from air. 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 authorised persons. 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 Corrosivity to Metals: Dry lead acetate is probably not corrosive. Lead acetate solutions are corrosive to gray cast iron, steel and aluminium at normal temperatures, and to copper, bronze and brass at higher temperatures (93 °C).

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).

Recommended Materials Glass or plastic containers; plastic or metal drums; metal can.

8. Exposure controls/personal protection

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Lead (II) Acetate Trihydrate			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 Aust) of 0.15 mg/m^3. 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: Excellent: NR latex and neoprene. Good: Vinyl gloves. Nitrile rubber gloves
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 or colourless crystalline solid, flakes, granules or powder; brown or grey lumps. Slowly effloresces.
Odour	Slight acetic acid odour.
Decomposition Temperature	> 200 °C.
Melting Point	75 °C.
Boiling Point	Decomposes at 200 °C.
Solubility in Water	Very soluble (45.61 g/100 mL at 15 °C). Takes up carbon dioxide from the air and becomes incompletely soluble.
Solubility in Organic Solvents	Freely soluble in glycerol. Insoluble in ethanol. Aqueous solutions of lead acetate dissolve lead monoxide.
Specific Gravity	2.55.
pH	5.5-6.5 (5% aqueous solution at 25 °C). Acidic.
Vapour Pressure	Negligible.
Vapour Density (Air=1)	13.1.
Evaporation Rate	Not available. Probably very low at normal temperatures.
Volatile Component	0 %vol @ 21 °C
Flammability	Non combustible material.
Explosion Properties	Not considered to be an explosion hazard. Danger of dust explosion in finely distributed form. Well-sealed containers may rupture violently when exposed to fire or excessive heat for sufficient time.
Molecular Weight	379.33.
Other Information	Index of refraction: 1.567 (Beta). Taste: Intensely sweet taste. Bulk density: ca. 1.200 kg/m^3.

10. Stability and reactivity

Chemical Stability	Stable under ordinary conditions of use and storage. Air sensitive. Slowly effloresces in air. Readily absorbs carbon dioxide from the air. May decompose on exposure to light or excessive heat, releasing water of crystallization when heated. Above 100 °C, it begins to lose some acetic acid and it decomposes completely at 200 °C.
Conditions to Avoid	Heat, flames, ignition sources, high temperatures, light, dust and mist generation, exposure to air and incompatible materials.
Incompatible Materials	Strong oxidizing agents (e.g. perchlorates, peroxides), strong acids (e.g. sulfuric acid), strong bases (e.g. sodium hydroxide, potassium hydroxide), potassium bromate in acetic acid, bromates, phenols, alcohols, chloral hydrate, sulfides, hydrogen peroxide, resorcinol, salicylic acid, sulfites, vegetable infusions, tannin, phosphates, citrates, chlorides, carbonates, tartrates, tinctures, soluble sulfates, strong reducing agents; gray cast iron, steel and aluminium at normal temperatures; copper, bronze and brass at higher temperatures (93 °C).
Hazardous Decomposition Products	Toxic and corrosive fumes of lead or lead oxide, acetic acid, carbon monoxide and carbon dioxide.

Possibility of hazardous reactions	Reaction with strong oxidizing agents (e.g. perchlorates, peroxides) may be violent and may cause fire and explosion. Reaction with strong acids (e.g. sulfuric acid) may be vigorous or violent, giving off acetic acid. Reaction with strong bases (e.g. sodium hydroxide, potassium hydroxide) may be vigorous or violent. Reacts with potassium bromate to form the lead acetate-lead bromate double salt, which is explosive and very sensitive to friction. Reacts violently with phosphates, carbonates, phenols. Avoid reaction with soluble sulfates, citrates, tartrates, chlorides, tannin, resorcinol, salicylic acid, chloral hydrate, sulfites, vegetable infusions, and tinctures.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Toxicology Information	NICNAS: Lead acetates: Human health tier II assessment
Acute Toxicity - Oral	LD50 (rat): 4665 mg/kg (RTECS)
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. 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	May be 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 diarrhea 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.
Skin Sensitisation	Lead acetate is not known as a skin sensitizer.
Carcinogenicity	Lead compounds, inorganic are evaluated in the IARC Monographs (Vol. 87; 2006) as Group 2A: Probably carcinogenic to humans.
Reproductive Toxicity	Toxic to Reproduction: Category 1A
STOT-repeated exposure	H373 May cause 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.
Mutagenicity	Mutagenic effects have occurred in experimental animals. Lead acetate (II), trihydrate (CAS # 6080-56-4): DNA inhibition system-mouse-intraperitoneal: 20 g/kg ('Dangerous Properties of Industrial Materials', 7th Ed., by N. Irving Sax and Richard J. Lewis).
Other Information	Toxicologically Synergistic Materials: Significantly increased kidney toxicity was reported in rats given lead acetate and selected nitroso- or amide-type chemicals. Nutritional status and exposure to other metals such as calcium, phosphorous, iron, zinc and copper may influence lead absorption and toxicity. 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

Ecotoxicity	Formation of health-hazardous mixtures possible with water. 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.
Environmental Protection	Do not allow to enter waters, waste water, or soil!
Acute Toxicity - Fish	Fish Acute Toxicity Endpoint 96 h LC50 = 108 µg Pb/L Experimental Pimephales promelas (fathead minnow) ASTM Method; Flow through CaCO3 = 43.9 mg/L, pH = 7.4 Chronic Toxicity Endpoint NOEC = 5.65 µg Pb/L Experimental Lepidomeda vittatus (Little Colorado spinedace) CaCO3 = 30 mg/L
Acute Toxicity - Algae	Algae Acute Toxicity Endpoint 8 h EC50 = 23.1 µg Pb/L Experimental Pseudokirchneriella subcapitata (green algae) OECD TG 201; Static CaCO3 = 24 mg/L, pH = 7.3 Reduced growth rate observed Chronic Toxicity Endpoint 48 h EC10 = 4.5 µg Pb/L Experimental Pseudokirchneriella subcapitata (green algae) OECD TG 201; Static CaCO3 = 24 mg/L, pH = 7.3 Reduced growth rate observed
Acute Toxicity - Other Organisms	Acute Toxicity Invertebrates 48 h LC50 = 73.6 µg Pb/L Experimental Ceriodaphnia dubia (water flea) US EPA Method; Semi-static CaCO3 = 16.4 mg/L, pH = 5.7 Chronic Toxicity NOEC = 19.5 µg Pb/L Experimental Daphnia magna (water flea) CaCO3 = 30 mg/L
Other Information	NICNAS: Water soluble lead(2+) salts: Environment tier II assessment

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	1616
UN proper shipping name	LEAD ACETATE
Transport hazard class(es)	6.1
Hazchem Code	2Z
Packaging Method	3.8.6.1
Packing Group	III
EPG Number	6B3
IERG Number	34

15. Regulatory information

Regulatory Information	All of the significant ingredients in this formulation are compliant with NICNAS regulations. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S6
Packaging & Labelling	
Hazard Category	Harmful,Dangerous for the environment

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: 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 and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
Empirical Formula & Structural Formula	Empirical Formula: C4-H6-O4.Pb.3H2O. Structural Formula: Pb(CH3COO)2.3H2O. ...End Of MSDS...