SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 02/07/2004
Date Updated: 09/04/2002
Version 1.20

Section 1 - Product and Company Information

Product Name LEAD(II) ACETATE TRIHYDRATE, 99+%, A.C.S. REAGENT
Product Number 215902
Brand Aldrich Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765 **Emergency Phone:** 414 273 3850 Ext. 5996
Fax: 800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
LEAD ACETATE TRIHYDRATE ACS REAGENT	6080-56-4	Yes

Formula (C2H3O2)2Pb.3H2O
Synonyms Acetic acid, lead(+2) salt trihydrate, Bis(acetato)trihydroxytrilead, Bleiazetat (German), Lead diacetate trihydrate

Section 3 - Hazards Identification

Emergency Overview
Toxic.
May cause cancer. May impair fertility. May cause heritable genetic damage. Danger of cumulative effects. Toxic by inhalation, in contact with skin, and if swallowed.
Target organ(s): Nerves. Blood.

HMIS Rating
Health: 4 Flammability: 0 Reactivity: 1

NFPA Rating
Health: 4 Flammability: 0 Reactivity: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A

Extinguishing Media
Suitable
Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area.

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

Storage
Suitable
Keep tightly closed. Store in a cool dry place.

Special Requirements
Absorbs CO2 from air. Light sensitive

Section 8 - Exposure Controls / PPE

Engineering Controls
Use only in a chemical fume hood. Safety shower and eye bath.

Personal Protective Equipment
Respiratory
Government approved respirator in nonventilated areas and/or for exposure above the TLV or PEL.
Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.

General Hygiene Measures
Wash contaminated clothing before reuse. Wash thoroughly after handling.

Exposure Limits, RTECS

Country	Source	Type	Value
USA	NIOSH	TWA	<0.1 MG(PB)/M3
USA	NIOSH	TWA	<0.1 MG(PB)/M3

Section 9 - Physical/Chemical Properties

Appearance

Physical State	Color	Form
Solid	White	Fine crystals

Molecular Weight: 379.33 AMU

pH	N/A
BP/BP Range	N/A
MP/MP Range	75 °C
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
SG/Density	2.55 g/cm3
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	N/A
Flash Point °C	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability

Conditions of Instability

May decompose on exposure to light

Materials to Avoid

Strong acids.

Hazardous Decomposition Products

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, Lead/lead oxides.

Hazardous Polymerization

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact

May cause skin irritation.

Skin Absorption

Harmful if absorbed through skin.

Eye Contact

May cause eye irritation.

Inhalation

Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion

Harmful if swallowed.

Target Organ(s) or System(s)

Blood. Central nervous system. Peripheral nervous system. G.I. System. Skeletal muscle. Kidneys. Female reproductive system. Male reproductive system.

Signs and Symptoms of Exposure

Lead salts have been reported to cross the placenta and to induce embryo- and feto- mortality. They also have teratogenic effect in some animal species. No teratogenic effects have been reported with exposure to organometallic lead compounds. Adverse effects of lead on human reproduction, embryonic and fetal development, and postnatal (e.g., mental) development have been reported. Excessive exposure can affect blood, nervous, and digestive systems. The synthesis of hemoglobin is inhibited and results in anemia. 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. May cause convulsions.

RTECS Number: OF8050000

Toxicity Data

Oral - Rat: 4,665 mg/kg (LD50)

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Intraperitoneal - Mouse: 174 MG/KG (LD50)

Intraperitoneal - Mouse: 174 MG/KG (LD50)

Chronic Exposure Carcinogen

Result: This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Rat - Oral: 8524 MG/KG 78W C

Result: Tumorigenic:Carcinogenic by RTECS criteria. Kidney, Ureter, Bladder:Kidney tumors. Tumorigenic Effects: Testicular tumors.

Rat - Oral: 8524 MG/KG 78W C

Result: Tumorigenic:Carcinogenic by RTECS criteria. Kidney, Ureter, Bladder:Kidney tumors. Tumorigenic Effects: Testicular tumors.

Chronic Exposure - Mutagen

Species	*Dose*	*Route*	*Mutation test*
Result: May alter genetic material.			
Mouse	20 GM/KG	Intraperitoneal	DNA inhibition
Mouse	20 GM/KG	Intraperitoneal	DNA inhibition

Chronic Exposure - Reproductive Hazard

Species	*Dose*	*Route of Application*	*Exposure Time*
Result: May cause reproductive disorders.			
Rat	2219 MG/KG	Oral	(18D POST)
Result: Effects on Newborn: Behavioral.			

Rat	2219 MG/KG	Oral	(18D POST)
	Result: Effects on Newborn: Behavioral.		
Rat	1611 MG/KG	Oral	(1-22D PREG/17D POST)
	Result: Effects on Newborn: Behavioral.		
Rat	1611 MG/KG	Oral	(1-22D PREG/17D POST)
	Result: Effects on Newborn: Behavioral.		
Rat	49780 MG/KG	Oral	(1-22D PREG/17D POST)
	Result: Effects on Newborn: Delayed effects.		
Rat	49780 MG/KG	Oral	(1-22D PREG/17D POST)
	Result: Effects on Newborn: Delayed effects.		
Rat	1593 MG/KG	Oral	(6W PRE-21D POST)
	Result: Effects on Newborn: Behavioral. Effects on Newborn: Physical.		
Rat	1593 MG/KG	Oral	(6W PRE-21D POST)
	Result: Effects on Newborn: Behavioral. Effects on Newborn: Physical.		
Rat	1763 MG/KG	Oral	(1-22D PREG/1-21D POST)
	Result: Effects on Newborn: Biochemical and metabolic. Effects on Newborn: Behavioral.		
Rat	1763 MG/KG	Oral	(1-22D PREG/1-21D POST)
	Result: Effects on Newborn: Biochemical and metabolic. Effects on Newborn: Behavioral.		
Mouse	1155 MG/KG	Oral	(21D POST)
	Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Other postnatal measures or effects.		
Mouse	1155 MG/KG	Oral	(21D POST)
	Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Other postnatal measures or effects.		
Mouse	56 MG/KG	Intraperitoneal	(9D PREG)
	Result: Maternal Effects: Other effects. Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).		

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material.
Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Lead acetate
UN#: 1616
Class: 6.1
Packing Group: Packing Group III
Hazard Label: Keep away from food
PIH: Not PIH

IATA
Proper Shipping Name: Lead acetate
IATA UN Number: 1616
Hazard Class: 6.1
Packing Group: III

Section 15 - Regulatory Information

EU Directives Classification
Symbol of Danger: T N
Indication of Danger
Toxic. Dangerous for the environment.
Risk Statements **R:** 61 33 48/22 50/53 62
May cause harm to the unborn child. Danger of cumulative effects. Also harmful: danger of serious damage to health by prolonged exposure if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility.
Safety Statements **S:** 53 45 61
Restricted to professional users. Attention - Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/safety data sheets.

US Classification and Label Text
Indication of Danger
Toxic.
Risk Statements
May cause cancer. May impair fertility. May cause heritable genetic damage. Danger of cumulative effects. Toxic by inhalation, in contact with skin, and if swallowed.
Safety Statements
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wear suitable protective clothing, gloves, and eye/face protection. Do not breathe dust.
US Statements
Target organ(s): Nerves. Blood.

United States Regulatory Information
SARA Listed: Yes
Deminimis: 1.0 %
Notes: This product is subject to SARA section 313 reporting requirements - lead compounds.

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.