

Chemical Safety Technical Data Sheet

Product Name:Lead Acetate, Trihydrate

Developed in accordance with GB/T 16483 and GB/T 17519

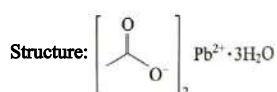
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Part 1: Identification of Chemicals and Enterprises

Chinese name of the chemical:Lead acetate trihydrate; Lead acetate; Lead acetate (trihydrate); Trihydrated lead acetate**Chemical name in English:**lead(II) acetate trihydrate; lead acetate**Molecular formula:** $Pb(CH_3COO)_2 \cdot 3H_2O$ **Molecular weight:**379.34**Recommended and restricted uses of the chemical:**For the preparation of lead salts and lead pigments; also used in biological staining, organic synthesis, and the pharmaceutical industry.

Part II Overview of Hazards

Summary of Emergency Situation: —**GHS Hazard Category:****Reproductive toxicity:**Category 1A**Specific target organ toxicity — repeated exposure:**Category 2**Hazard to aquatic environment — Acute hazard:**Category 1**Harm to aquatic environment — Long-term harm:**Category 1**Tag Elements:****figurative graph :****Warning phrase:**Hazard**Hazard Description:**May cause harm to fertility or the fetus; prolonged or repeated exposure may lead to organ damage; highly toxic to aquatic organisms with long-term effects.**Prevention Measures:****【 preventive measure 】**

- Perform the operation after receiving specialized guidance.
- Do not operate before reading and understanding all safety precautions.
- Use personal protective equipment as required.
- Avoid inhalation of dust.
- Do not discharge into the environment.

[Accident Response]

- Seek medical attention if you come into contact with the substance or have concerns.
- Seek medical attention if discomfort occurs.
- Collect the spill.

【 safe storage 】

- Lock and store securely.

[Disposal of Waste]

·This product, its contents, and the container shall be disposed of in accordance with national and local regulations.

Physical and chemical hazards:Flammable; its powder, when mixed with air, can form an explosive mixture.

Health Hazards:Impacts on the hematopoietic, nervous, digestive systems, and kidneys. Occupational poisoning is primarily chronic in nature. Neurological manifestations include neurasthenic syndrome, peripheral neuropathy (with significant impairment of motor function), and severe cases may develop lead encephalopathy. Digestive symptoms encompass gingival lead streaks, loss of appetite, nausea, abdominal distension, diarrhea or constipation; abdominal cramps occur in moderate to severe cases. Hematopoietic disturbances manifest as porphyria metabolism disorders and anemia. Short-term high exposure can cause acute or subacute lead poisoning with symptoms resembling severe chronic lead poisoning. The substance can be absorbed through the skin, causing burns, and is irritating to the eyes.

Environmental hazards:It is highly toxic to aquatic organisms and has long-term, persistent effects.

Part III: Composition/Composition Information

√matter		Mixture
Component	Concentration	CAS No.
Lead acetate, trihydrate	≥98 0%	6080-56-4

Part IV Emergency Management Measures

Inhalation:Immediately remove the individual from the area to fresh air. Keep the airway clear. If breathing is difficult, administer oxygen. In case of respiratory or cardiac arrest, perform cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.

Skin contact:Immediately remove contaminated clothing and rinse thoroughly with running water. Seek medical attention.

Eye contact:Immediately open the eyelids and rinse thoroughly with running water or saline solution. Seek medical attention.

Ingestion:Rinse mouth and drink water. Seek medical attention.

Advice for rescuers:Use personal protective equipment as needed.

Special note for physicians:Detoxifying agents include disodium calcium edetate, sodium disuccinylbutyrate, and succinyl butyrate.

Part V Fire Safety Measures

Fire extinguishing agents:Use water mist, foam, dry powder, carbon dioxide, or sand to extinguish fires.

Special hazards:Can ignite upon contact with open flames. Releases toxic gases when decomposed by high heat.

Fire suppression precautions and protective measures:Firefighters must wear respirators and full-body fire-resistant and chemical-proof suits, approaching the fire from upwind. Move containers to an open area whenever possible. Spray water to keep containers cool until the fire is fully extinguished.

Part VI: Emergency Response to Leaks

Protective measures, protective equipment, and emergency response procedures for personnel:Isolate the contaminated leakage area and restrict access. Emergency responders are advised to wear dust masks and protective clothing. Do not handle ruptured containers or leaked materials before wearing appropriate protective gear. Try to cut off the source of the leak.

Environmental protection measures:Cover the spill with plastic sheeting to minimize scattering.

Methods for containing, cleaning up leaked chemicals and the disposal materials used:Do not allow water to enter the packaging container. Collect the spill using a clean shovel and place it in a clean, dry container with a loose lid; then move the container away from the spill area.

Part VII: Handling, Storage and Disposal

Operating Precautions:Perform operations in a sealed environment with local exhaust ventilation. Operators must undergo specialized training and strictly adhere to operating procedures. It is recommended that operators wear self-suction filtering dust masks, chemical safety goggles, protective clothing against toxic substance penetration, and rubber gloves. Keep away from sources of ignition and heat; smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. Prevent dust generation. Avoid contact with acids and alkalis. Handle with care during transportation to prevent damage to packaging and containers. Equip with appropriate types and quantities of fire extinguishers and leakage emergency response equipment. Empty containers may still contain hazardous residues.

Storage Precautions:Store in a cool, well-ventilated warehouse. Keep away from sources of ignition and heat. Store separately from acids and alkalis; avoid mixing. Provide adequate fire-fighting equipment in appropriate quantities. The storage area should be equipped with suitable materials to contain spills.

Part VIII Contact Control/Personal Protection

Occupational exposure limits:China: No standards established.

United States (ACGIH): 0.05 mg/m ³[based on Pb].

Biological contact limit:No standard established.

Monitoring methods:Methods for determining toxic substances in the air: No standards have been established. Methods for biological monitoring tests: No standards have been established.

Process Control:Hermetically sealed operation with local exhaust ventilation. Safety shower and eye-wash facilities provided.

Personal Protective Equipment:

Respiratory protection:When airborne dust concentrations exceed permissible limits, a filtered respirator must be worn. During emergency rescue or evacuation operations, an air respirator should be used.

Eye protection:Wear chemical safety goggles.

Skin and body protection:Wear protective clothing resistant to toxic substance penetration.

Hand protection:Wear rubber gloves.

Part Nine Physical and Chemical Properties

Appearance and characteristics: Colorless, transparent crystals with a slight acetic acid odor; industrial products are large gray-brown masses.	Melting point (°C): 75 (water loss)
pH value: Not applicable	
Boiling point (°C): 280 (anhydrous)	Relative density (water = 1): 2.55
Relative vapor density (air = 1): No data	Saturation vapor pressure (kPa): No data
Critical pressure (MPa): No data	Octanol/water partition coefficient: No data
Flash point (°C): No data available	Self-ignition temperature (°C): No data
Lower explosive limit (%): No data	Explosion Limit (%): No data
Decomposition temperature (°C): 200	Viscosity (mPa·s): No data
Combustion heat (kJ/mol): No data	Critical temperature (°C): No data
Solubility: Soluble in water, slightly soluble in alcohol, readily soluble in glycerol.	

Part 10: Stability and Reactivity

Stability:Stable.

Hazardous reaction:Reaction with incompatible substances such as strong acids or strong bases.

Conditions for avoiding contact:No information available.

Incompatible substances:strong acids, strong bases.

Dangerous decomposition product:lead oxide.

Part XI Toxicological Information

Acute toxicity:LD₅₀:4665 mg/kg (oral administration in rats), 174 mg/kg (intraperitoneal administration in mice).

Skin irritation or corrosion:non-avaible 。

Eye irritation or corrosion:non-avaible 。

Respiratory or skin allergy:non-avaible 。

Mutability of germ cells:DNA inhibition: Intraperitoneal administration of 20 g/kg in mice.

Carcinogenicity:IARC assessment: There is sufficient evidence of carcinogenicity in animals.

Reproductive toxicity:Oral administration of the lowest toxic dose (TDLo) of 4.62 mg/kg over multiple generations in mice caused developmental malformations in the hematopoietic and lymphatic systems (including the spleen and bone marrow).

Specific target organ system toxicity – single exposure:No data available.

Specific target organ system toxicity – repeated exposure:No data available.

Inhalation hazards:No data available.

Part XII: Ecological Information

Ecotoxicity:Lead-containing compounds are highly toxic to aquatic organisms.

Durability and Degradability:

Biodegradability: No data available.

Non-biodegradability: No data available.

Potential bioaccumulation:No data available.

Mobility in soil:No data available.

Part 13: Waste Disposal

Waste chemicals:Dispose in accordance with applicable national and local regulations. Alternatively, contact the manufacturer or producer to determine the proper disposal method.

Contaminated packaging:Return the container to the manufacturer or dispose of it in accordance with national and local regulations.

Disposal precautions:Return empty containers to the manufacturer or dispose of them at designated sites.

Part 14: Transportation Information

United Nations Dangerous Goods Number (UN number):1616

United Nations Transport Name:Lead acetate (lead acetic acid)

United Nations Hazard Classification:6.1

Packaging category:Class III packaging

packing mark :



Marine pollutants:are

Transportation Precautions:Before transportation, verify that the packaging container is intact and sealed. During transit, ensure the container remains leak-proof, stable, free from collapse or damage. Do not transport it together with acids, oxidizers, food products, or food additives. Protect the container from direct sunlight, rain, and high temperatures during transportation.

Part 15: Regulatory Information

The following laws, regulations, rules, and standards contain corresponding provisions for the management of this chemical substance.

Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases:Classification and catalog of occupational diseases: Lead and its compound poisoning.

Regulations on the Safety Management of Hazardous Chemicals:List of hazardous chemicals: Included. List of explosive-prone hazardous chemicals: Not included. List of key hazardous chemicals under supervision:Not included. GB18218-2018 "Identification of Major Hazard Sources for Hazardous Chemicals" (Table 1):Not included.

Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used:List of highly toxic substances: Not included.

Regulations on the Management of Chemicals Susceptible to Drug Manufacturing:Classification and list of types of chemicals susceptible to drug manufacturing: Not included.

International Conventions:Stockholm Convention: Not included; Rotterdam Convention: Not included; Montreal Protocol: Not included.

Part 16: Other Information

Writing and Revision Information:

Changes in this version:Compared to the previous version, new sections on molecular formulas, molecular weights, and structural formulas have been added; corresponding content has been incorporated in accordance with the "Comprehensive Book of Safety Technology for Hazardous Chemicals"; and the order of certain sections has been adjusted.

Revision notes:Updated every 5 years or when new relevant national laws and regulations are enacted.

References:Safety Culture Network

Disclaimer:The information in this SDS applies solely to the specified product. Unless otherwise stated, it does not apply to mixtures of this product with other substances. This SDS provides safety information only for properly trained users of the product. Users must independently assess the suitability of this SDS under specific usage conditions. The authors of this SDS shall not be liable for any injuries resulting from its use in exceptional circumstances.