

SPI Supplies Division

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: March 25, 2015

SPI Catalog # 02616 Lead Citrate Trihydrate

Section 1: Identification

Chemical Name/Synonyms..... Lead Citrate trihydrate

Chemical family..... Organic salt

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-527-3887

Worldwide FAX: 1-(703)-741-6090

Toll-free phone: 1-(800)-424-9300 USA only

Product or Trade Name..... Lead Citrate trihydrate

CAS #'s..... 512-26-5

Chemical Formula..... $C_{12}H_{10}Pb_3O_{14} \cdot 3H_2O$

Intended Use: Stain for microscopy. Available in 30 gram size only.

Section 2: Hazard Identification

GHS CLASSIFICATION

Acute toxicity, Oral (category 4)

Acute toxicity, Inhalation (category 4)

Carcinogenicity (Category 1B)

Specific target organ toxicity – repeated exposure (Category 2)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

GHS Label Elements

Pictogram:



Signal Word: **Danger**

Hazard Statements:

- H302 + H332 Harmful if swallowed or if inhaled.
- H350 May cause cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using the 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.
- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell. Rinse mouth.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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.
- P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous Material Information System USA

- Health..... 2
- Fire Hazard..... 0
- Reactivity..... 0
- Personal Protection.....

NFPA Rating (estimated)

- Health..... 2
- Flammability..... 0
- Reactivity..... 0

Section 3: Composition

Lead Citrate Trihydrate $Pb_3(C_6H_5O_7)_2 \cdot 3H_2O$ CAS# 512-26-5 >99%

Section 4: First Aid Measures

General Information: Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident.

If inhaled: Move person to fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water.

In case of eye contact: Flush with copious amounts of water for at least 15 minutes, separating eyelids with fingers.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed: No further relevant information available.

Section 5: Fire Fighting Measures

Extinguishing media: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards: Carbon oxides, Lead oxides.

Advice for firefighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Further information: No data available.

Section 6: Accidental Release Measures

Emergency Procedures: Avoid dust formation. Ensure adequate ventilation.

Personal precautions, protective equipment: Use personal protective equipment. Avoid breathing vapors, mist or gas. Avoid breathing dust. Evacuate personnel to safe areas.

Environmental precautions: Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Storage conditions: Keep container tightly closed in a dry, well-ventilated place.

Section 8: Exposure Controls and Personal Protection

Exposure Limit:

Lead citrate trihydrate CAS# 512-26-5 TWA: 0.050000 mg/m³ NIOSH recommended

Engineering controls:

Provide adequate exhaust ventilation to meet exposure limits.

Use good industrial hygiene and safety practices.

Wash hands before breaks and at the end of the day.

Personal protective equipment:

Eye/face protection: Safety glasses with side shields, or chemical splash goggles.

Skin protection: Handle with gloves. Nitrile with minimum thickness of 0.1mm recommended.

Body protection: Protective clothing to prevent skin contact.

Respiratory protection: Where exposure levels exceed the TWA, use P95 (US) or P1 (EU EN 143).

Control of Environmental Exposure:

Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

Appearance: White crystalline powder
Odor: Not available
pH: Not available
Melting point/ Freezing point: Not available
Flash point: Not available
Flammability: Product is not flammable.
Ignition temperature: Not determined.
Decomposition temperature: Not determined.
Auto igniting: Not determined.
Danger of explosion: Product does not present an explosion hazard.
Explosion limits: Not determined.
Vapor pressure: Not available.
Density: Not determined.
Relative density: Not determined.
Vapor density: Not applicable.
Evaporation rate: Not applicable
Solubility in water: Not determined.
Viscosity: Not determined.
Formula Weight: 1,053.8

Section 10: Stability and Reactivity

Reactivity: No data available.
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions; No hazardous reactions known.
Conditions to avoid: No data available.
Incompatible materials: Strong oxidizing agents, Strong acids.
Hazardous decomposition products: No dangerous decomposition products known.
Under fire conditions: oxides of carbon, oxides of lead.

Section 11: Toxicological Information

Information on toxicological effects:

Acute toxicity:

Primary irritant effect:

- On the skin – No irritant effect
- On the eye – No irritating effect
- Sensitization – No known sensitizing effects

Additional toxicological information:

Carcinogenicity: Not listed by IARC, ACGIH, or OSHA.
The NTP lists Lead containing compounds as suspected human carcinogens.

Reproductive toxicity: No data available.

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

Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Lead is a potent neurotoxin, affecting the Central Nervous System and the Peripheral Nervous System. High levels of exposure result in profound cognitive impairments.

Section 12: Ecological Information

Toxicity: No data available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility in soil: No information available.

Ecotoxic effects: Very toxic for fish with long lasting effects.

Water hazard class 3: Extremely hazardous for water.

Results of PBT and vPvB assessment:

PBT: Not applicable.

vPvB: Not applicable.

Section 13: Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material, including any surplus material, non-recyclable solutions, or contaminated packaging.

Must not be disposed of together with household garbage. Must not be allowed to reach sewage system.

Section 14: Transport Information

DOT (US):

UN number: 2291

Proper shipping name: Lead compounds, soluble, n.o.s. (Trilead dicitrate trihydrate)

Class: 6.1

Packing group: III

IMDG:

UN number: 2291

Proper shipping name: LEAD COMPOUND, SOLUBLE, N.O.S. (Trilead dicitrate trihydrate)

Class: 6.1

Packing Group: III

EMS-No: F-A, S-A

Marine pollutant: yes

IATA

UN number: 2291

Proper shipping name: LEAD COMPOUND, SOLUBLE, N.O.S. (Trilead dicitrate trihydrate)

Class: 6.1

Packing Group: III

Section 15: Regulatory Information

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard.

State Right to Know Lists:

CAS# 512-26-5 is listed on the Massachusetts, New Jersey, and Pennsylvania Right to Know Lists.

California Prop. 65:

CAS# 512-26-5 is listed as a chemical known to the State of California to cause cancer.

Section 16: Other Information

Disclaimer of Liability:

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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