

Material Safety Data Sheet

Lead citrate, trihydrate, 96% (titr.)

ACC# 04573

Section 1 - Chemical Product and Company Identification

MSDS Name: Lead citrate, trihydrate, 96% (titr.)

Catalog Numbers: AC413060000, AC413061000, AC413065000

Synonyms: 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, lead(2+) salt (2:3); 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, lead(2++) salt (2:3); Trilead dicitrate

Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
512-26-5	1,2,3-propanetricarboxylic acid, 2-hydroxy-,lead(2+)salt(2:3)	96	208-141-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white solid.

Warning! Harmful if swallowed, inhaled, or absorbed through the skin. Potential cancer hazard. May cause cancer based on animal studies. Danger of cumulative effects. May cause kidney damage. May cause possible death. This product contains lead, a chemical known to the state of California to cause developmental effects. This product contains lead, a chemical known to the state of California to cause cancer. May cause reproductive and fetal effects.

Target Organs: Blood, kidneys, nerves.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. Harmful if absorbed through the skin.

Ingestion: May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. May cause headache. Exposure may cause anemia and other blood abnormalities. May cause degenerative brain changes. Ingestion of lead compounds can cause toxic effects in the blood-forming organs, kidneys and central nervous system. Acute lead poisoning can cause muscle weakness, "lead line" on the gums, metallic taste, definite loss of appetite, insomnia, dizziness, high lead levels in blood and urine with shock, coma and death in extreme cases.

Inhalation: Harmful if inhaled. May cause effects similar to those described for ingestion. May cause respiratory tract irritation. May cause irritation of the mucous membranes.

Chronic: May cause paralysis. Repeated exposure may cause nervous system abnormalities with muscle weakness and damage, motor incoordination, and sensation disturbances. Lead salts have been reported to cross the placenta and induce embryo- and fetio- mortality.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure. Destroy contaminated shoes.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Wash area with soap and water. Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Use with adequate ventilation.

Storage: Store in a cool, dry place. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1,2,3-propanetricarboxylic acid, 2-hydroxy-,lead(2+)salt(2:3)	none listed	0.050 mg/m ³ TWA (as Pb) (listed under Lead compounds).	none listed

OSHA Vacated PELs: 1,2,3-propanetricarboxylic acid, 2-hydroxy-,lead(2+)salt(2:3): No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: none reported

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point:Not available.

Decomposition Temperature:Not available.

Solubility: Not available.

Specific Gravity/Density:Not available.

Molecular Formula:C₁₂H₁₀O₁₄Pb₃.3H₂O

Molecular Weight:1053.85

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, lead/lead oxides.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 512-26-5 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 512-26-5:

- **ACGIH:** Not listed.
- **California:** carcinogen, initial date 10/1/92 (listed as Lead compounds).
- **NTP:** Suspect carcinogen (listed as Lead compounds).
- **IARC:** Not listed.

Epidemiology: Repeated exposure to lead has caused many toxic effects including: neurological changes, kidney damage, and blood abnormalities. IARC Group 2B: No data available on human carcinogenicity, however sufficient evidence of carcinogenicity in animals.

Teratogenicity: No information found

Reproductive Effects: Adverse reproductive effects have occurred in humans.

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No data available.

Physical: No data available.

Other: None.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	LEAD COMPOUNDS, SOLUBLE, N.O.S.	No information available.
Hazard Class:	6.1	
UN Number:	UN2291	
Packing Group:	III	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 512-26-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 512-26-5: immediate, delayed.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

CAS# 512-26-5 (listed as Lead compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 512-26-5 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 512-26-5 can be found on the following state right to know lists: California, (listed as Lead compounds), Pennsylvania, (listed as Lead compounds), Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains 1,2,3-propanetricarboxylic acid, 2-hydroxy-,lead(2+)salt(2:3), listed as 'Lead compounds', a chemical known to the state of California to cause cancer.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

R 20/22 Harmful by inhalation and if swallowed.
R 33 Danger of cumulative effects.
R 61 May cause harm to the unborn child.
R 62 Possible risk of impaired fertility.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 53 Avoid exposure - obtain special instructions before use.

WGK (Water Danger/Protection)

CAS# 512-26-5: No information available.

Canada - DSL/NDSL

CAS# 512-26-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 512-26-5 is not listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 7/08/1999

Revision #3 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.