

Lead

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lead

Synonyms/Generic Names: None

SDS Number: 396.00

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Carcinogen, Target organ effect, Harmful by ingestion, Teratogen

Target Organs: Nerves, Blood, Kidney, Female reproductive system, Male reproductive system

Signal Word: Warning

Pictograms:



GHS Classification:

Acute toxicity, Oral	Category 4
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity - repeated exposure	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H302	Harmful if swallowed.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P273	Avoid release to the environment.
P281	Use personal protective equipment as required.
P501	Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	Harmful if swallowed.

NFPA Ratings

Health	2
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	0
Reactivity	0
Personal	E

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Lead	100	7439-92-1	231-100-4	Pb	207.20 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Flush with plenty of water and wash using soap. Get medical attention.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (lead oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Lead	0.05 mg/m ³	TLV	ACGIH
	0.05 mg/m ³	PEL	OSHA
	0.05 mg/m ³	REL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Solid.
Odor	Not Available
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	327.43°C (621.4°F)
Initial boiling point and boiling range	1740°C (3164°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available

Density	11.3 (Water = 1)
Solubility (ies)	Insoluble in water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Not Available
Incompatible Materials	Sodium carbide, chlorine trifluoride, trioxane + hydrogen peroxide, ammonium nitrate, sodium azide, disodium acetylide, sodium acetylide, hot concentrated nitric acid, hot concentrated hydrochloric acid, hot concentrated sulfuric acid, zirconium.
Hazardous Decomposition Products	Lead oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available

Carcinogenicity

IARC	2B-Group 2B: Possibly carcinogenic to humans (Lead).
ACGIH	A3: Animal carcinogen (Lead).
NTP	2: Reasonably anticipated to be carcinogens (Lead).
OSHA	1910.1025 (Lead).

Signs & Symptoms of Exposure

Skin	Irritation, redness, itchiness.
Eyes	Irritation, redness, watering eyes, itchiness.
Respiratory	Metallic taste, fever, nausea, vomiting, chills, cough, weakness, chest pain, generalized muscle pain/aches, and increased white blood cell count.
Ingestion	Abdominal pain or cramps (lead cholic), spasms, nausea, vomiting, headache, muscle weakness, hallucinations, distorted perceptions, "lead line" on the gums, metallic taste, loss of appetite, insomnia, and dizziness.

Chronic Toxicity	Possible carcinogen. . May cause damage to the following organs: blood, kidneys, central nervous system (CNS).
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	May cause damage to organs through prolonged or repeated exposure.
Reproductive Toxicity	Suspected human reproductive toxicant.
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	mortality LOEC - Oncorhynchus mykiss (rainbow trout) - 1.19 mg/l - 96.0 h LC50 - Micropterus dolomieu - 2.2 mg/l - 96.0 h mortality NOEC - Salvelinus fontinalis - 1.7 mg/l - 10.0 d
Aquatic Invertebrate	mortality LOEC - Daphnia - 0.17 mg/l - 24 h mortality NOEC - Daphnia - 0.099 mg/l - 24 h
Terrestrial	mortality EC50 - Skeletonema costatum - 7.94 mg/l - 10 d

Persistence and Degradability	Not Available
Bioaccumulative Potential	Oncorhynchus kisutch - 2 Weeks Bioconcentration factor (BCF): 12
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste products or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN3077, Environmentally hazardous substance, solid, n.o.s., (lead), 9, pg III
TDG	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (LEAD), 9, pg III
IMDG	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (LEAD), 9, pg III
Marine Pollutant	No
IATA/ICAO	UN3077, Environmentally hazardous substance, solid, n.o.s., (lead), 9, pg III

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Listed: Lead
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Lead
SARA 312	Lead
SARA 313	Listed: Lead
WHMIS Canada	CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

16. OTHER INFORMATION

Revision	Date
Revision 1	01/09/2013

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