

Lead
12510

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Lead

Catalog Numbers:

S71957, S71957-1, S75257, S80049, L18 500, L18-500, L18500, L246 500,
L246-500, L246500, L27 1LB, L27-1LB, L271LB, S719571

Synonyms:

Lead Metal

Company Identification: Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
7439-92-1	LEAD	99.8	231-100-4

Hazard Symbols: T
Risk Phrases: 20/22 33 61 62

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: bluish white, silvery gray.

Caution! Dangerous to the environment. May cause central nervous system depression. May be absorbed through the skin. May cause kidney damage. May cause respiratory and digestive tract irritation. Can cause reproductive effects. Causes eye and skin irritation. May cause fetal effects.

Target Organs: Kidneys, central nervous system, blood forming organs.

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

Causes skin irritation. May be absorbed through the skin.

Ingestion:

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of lead compounds can cause toxic effects in the blood-forming organs, kidneys and central nervous system. Symptoms of lead poisoning or plumbism include weakness, weight loss, lassitude, insomnia, and hypotension. It also includes constipation, anorexia, abdominal discomfort and colic.

Inhalation:

May cause respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. May cause effects

similar to those described for ingestion.

Chronic:

Chronic exposure may cause reproductive disorders and teratogenic effects. Chronic exposure to lead may result in plumbism which is characterized by lead line in gum, headache, muscle weakness, mental changes,

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure.

Ingestion:

Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and

Antidote:

The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel. The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel. The use of Calcium disodium EDTA as a chelating agent should be determined by qualified medical personnel.

**** 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. Use extinguishing media appropriate to the surrounding fire. Substance is noncombustible. Dust can be an explosion hazard when exposed to heat or flame.

Extinguishing Media:

For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

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

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Wash clothing before reuse.

Storage:

Store in a cool, dry place. Keep from contact with oxidizing materials. 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
LEAD	0.05 mg/m ³	as Pb: 0.100 mg/m ³ TWA; see Appendix C for supplementary exposure limits	as Pb: 50 ug/m ³ TWA PEL; 30 ug/m ³ action level; Poison (see 29 CFR 1910.1025)
		as Pb: 100 mg/m ³ IDLH	

OSHA Vacated PELs:

LEAD:

No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Solid
Appearance: bluish white, silvery gray
Odor: None reported
pH: Not applicable.
Vapor Pressure: 1.3 mm Hg @ 970C
Vapor Density: Not available.
Evaporation Rate: Not applicable.
Viscosity: Not applicable.
Boiling Point: 1740 deg C
Freezing/Melting Point: 327.4 deg C
Autoignition Temperature: Not available.
Flash Point: Not available.
NFPA Rating: (est.) Health: 2; Flammability: 0; Reactivity: 0
Explosion Limits, Lower: Not available.
Upper: Not available.
Decomposition Temperature: Not available.
Solubility: Insoluble in water.
Specific Gravity/Density: 11.3
Molecular Formula: Pb
Molecular Weight: 207.2

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
Stable under normal temperatures and pressures.
Conditions to Avoid:
Dust generation, excess heat, strong oxidants.
Incompatibilities with Other Materials:
Strong oxidizing agents.
Hazardous Decomposition Products:
Lead/lead oxides.
Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:
CAS# 7439-92-1: OF7525000
LD50/LC50:
Not available.
Carcinogenicity:
LEAD -
ACGIH: elemental, as Pb; A3 - animal carcinogen
California: carcinogen; initial date 10/1/92
OSHA: Possible Select carcinogen
IARC: Group 2B carcinogen
Epidemiology:
There are several reports that certain lead compounds administered to animals in high doses are carcinogenic, primarily producing renal tumors. Salts demonstrating carcinogenicity in animals are usually soluble salts. Epidemiological studies have not shown a relationship between lead exposure and the incidence of cancer in lead workers. However, one study of lead-exposed workers demonstrated a statistically significant elevation in the standardized mortality ratio for gastric and lung cancer in battery plant workers only.
Teratogenicity:

Lead penetrates the placental barrier and has caused fetal abnormalities in animals. Excessive exposure to lead during pregnancy has caused neurological disorders in infants.

Reproductive Effects:

Reproductive effects from lead have been documented in animals and human beings of both sexes. In battery workmen with a mean exposure of 8.5 years to lead, there was an increased frequency of sperm abnormalities as compared with a control group.

Neurotoxicity:

Subtle neurologic effects have been demonstrated with relatively low blood levels of lead. The performance of lead workers on various neurophysiological tests was mildly reduced when compared with a control group. Anxiety, depression, poor concentration, forgetfulness, mild reductions in motor and sensory nerve conduction velocities have been documented in lead-exposed workers.

Mutagenicity:

No data available.

Other Studies:

No data available.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:

LC50 Japanese quail (*Coturnix japonica*), males or females, 14 days old, oral (5-day ad libitum in diet) >5,000 ppm; at 1000, 2236 & 5000 onset of toxic signs began at 7, 7 & 7 days and remitted at 11, 11 & 12 days, respectively, no mortality was observed; control references were dieldrin & dicrotophos; corn oil diluent was added to diet at ratio of 2:98 by wt; (extreme concentrations: 1,000-5,000 ppm) /Lead metal, 100%.

Other

For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Chemical waste generators must determine whether a discarded chemical is class if as a hazardous waste.

US EPA guidelines for the classification determination are listed in 40 CFR Part Additionally, waste generators must consult state and local hazardous waste regu ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT

Shipping Name: RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (CONTAINS LEAD SHOT)

Hazard Class: 9

UN Number: UN3077

Packing Group: III

Canadian TDG

No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL

TSCA

CAS# 7439-92-1 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
CAS# 7439-92-1: 6a/12b
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)
CAS# 7439-92-1: final RQ = 10 pounds (4.54 kg) (no reporting of releases)
Section 302 (TPQ)
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 7439-92-1: acute, chronic.
Section 313
This material contains LEAD (CAS# 7439-92-1, 99.8%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Clean Air Act:

CAS# 7439-92-1 listed as ** no name ** 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.
CAS# 7439-92-1 is listed as a Priority Pollutant under the Clean Water Act.
CAS# 7439-92-1 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

LEAD can be found on the following state right to know lists:
California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

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

WARNING: This product contains LEAD, a chemical known to the state of California to cause cancer.

WARNING: This product contains LEAD, a chemical known to the state of California to cause birth defects or other reproductive harm.

California No Significant Risk Level:

CAS# 7439-92-1: NOEL = 0.5 ug/day

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:

WGK (Water Danger/Protection)

CAS# 7439-92-1: No information available.

United Kingdom Occupational Exposure Limits

Canada

CAS# 7439-92-1 is listed on Canada's DSL/NDSL List.

This product has a WHMIS classification of D2A.

CAS# 7439-92-1 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 7439-92-1: OEL-FRANCE:TWA 150 mg/m3

OEL-GERMANY:TWA 0.1 mg/m3

OEL-POLAND:TWA 0.05 mg/m3

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 4/29/1999 Revision #2 Date: 8/02/2000

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 way shall the company 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 the company has been advised of the possibility of such damages.
