

Classified as hazardous in accordance with the criteria of EPA New Zealand

## Section 1 - Identification

### Product Identifier

<b>Product Name</b>	<u>Lead foil/shot</u>
<b>Synonyms</b>	Lead metal.
<b>Molecular Formula</b>	Pb
<b>Molecular Weight</b>	207.19
<b>Recommended Use</b>	Laboratory chemicals.
<b>Uses advised against</b>	No Information available

<b>Product Code</b>	<b>AJA1114, AJA597</b>
<b>Address</b>	Thermo Fisher Scientific New Zealand Ltd 244 Bush Road, Albany, Auckland, New Zealand
<b>Emergency Tel.</b>	<b>CHEMTREC®</b> <b>09 980 6780 or +64 9 980 6780</b>
<b>Telephone / Fax Numbers</b>	Tel: 09 980 6700 Fax: 09 980 6788
<b>E-mail address</b>	<a href="mailto:ANZinfo@thermofisher.com">ANZinfo@thermofisher.com</a>

## Section 2 - Hazard(s) Identification

### Classification under Work Safe New Zealand

Classified as hazardous in accordance with the criteria of EPA New Zealand

**HSNO Approval Number**      **HSR002809**

### GHS Classification

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

Acute Oral Toxicity	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1A Category 1
/; Effects on or via lactation	
Specific target organ toxicity - (repeated exposure)	Category 2

#### Environmental hazards

Acute aquatic toxicity	Category 1
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Chronic aquatic toxicity

Category 1

**Label Elements****Signal Word****Danger****Hazard Statements**

H332 - Harmful if inhaled  
 H360 - May damage 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  
 H301 - Toxic if swallowed  
 H341 - Suspected of causing genetic defects if inhaled  
 H351 - Suspected of causing cancer  
 H362 - May cause harm to breast-fed children

**Precautionary Statements****Prevention**

P201 - Obtain special instructions before use  
 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 face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P273 - Avoid release to the environment

**Response**

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 P308 + P313 - IF exposed or concerned: Get medical advice/attention  
 P330 - Rinse mouth  
 P391 - Collect spillage

**Storage**

P403 - Store in a well-ventilated place

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other hazards which do not result in classification**

Toxic to terrestrial vertebrates  
 This product does not contain any known or suspected endocrine disruptors

## Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Lead	7439-92-1	>95

## Section 4 - First Aid Measures

**Description of first aid measures**

<b>New Zealand Emergency Tel.</b>	CHEMTREC® 09 980 6780 or +64 9 980 6780
<b>Inhalation</b>	Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.
<b>Eye Contact</b>	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
<b>Ingestion</b>	Call a physician immediately. Clean mouth with water.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
<b>First Aid Facilities</b>	Eyewash, safety shower and washroom.
<b>Most important symptoms and effects</b>	No information available.
<b>Notes to Physician</b>	Treat symptomatically.

## Section 5 - Fire Fighting Measures

### **Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### **Extinguishing media which must not be used for safety reasons**

No information available.

### **Specific Hazards Arising from the Chemical**

Non-combustible. Do not allow run-off from fire-fighting to enter drains or water courses.

### **Hazardous Combustion Products**

Lead, lead oxides.

### **Special protective equipment and precautions for fire fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## Section 6 - Accidental Release Measures

### **Personal Precautions, Protective Equipment and Emergency Procedures**

#### **Emergency procedures**

Ensure adequate ventilation.

#### **Environmental Precautions**

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

#### **Methods for Containment and Clean Up**

Sweep up and shovel into suitable containers for disposal.

#### **Precautions to prevent secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations

#### **Reference to Other Sections**

Refer to protective measures listed in Sections 8 and 13.

## Section 7 - Handling and Storage

### Precautions for Safe Handling

#### Advice on safe handling

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Handle under inert gas, protect from moisture. Use only under a chemical fume hood.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### Conditions for Safe Storage, Including any Incompatibilities

#### Storage Conditions

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Protect from direct sunlight.

#### Incompatible Materials

Strong acids. Ammonium nitrate: fertilizers capable of self-sustaining decomposition. Peroxides. Metals. Finely powdered metals.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

## Section 8 - Exposure Controls and Personal Protection

### Control parameters

#### Exposure limits

**NZ** - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

**UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

**AUS** - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia

**ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace.

Component	New Zealand WEL	Australia	ACGIH TLV	The United Kingdom
Lead	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>	STEL: 0.45 mg/m <sup>3</sup> 15 min TWA: 0.15 mg/m <sup>3</sup> 8 hr

#### Biological limit values

**NZ** - Substances assigned Biological Exposure Indices in the New Zealand Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

**ACGIH** - American Conference of Governmental Industrial Hygienists (ACGIH) TLVs® and BEIs®- Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices. 2022 Edition

Component	New Zealand	Australia	ACGIH - Biological Exposure Indices	United Kingdom
Lead	3 µg/dL (blood) not critical (Lead) 0.14 µmol/L (blood) not critical (Lead) 0.48 µmol/L (blood) not critical (Lead) 10 µg/dL (blood) not critical (Lead)		200 µg/L Medium: blood Time: not critical Determinant: Lead	

### Appropriate engineering controls

#### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

#### Individual protection measures, such as personal protective equipment

**Eye Protection** Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection** Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Natural rubber, Nitrile rubber, Neoprene, PVC.	See manufacturers recommendations	-	AS/NZS 2161	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure

**Respiratory Protection** Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

**Recommended Filter type:** Particulates filter conforming to EN 143 (or AUS/NZ equivalent)

**Recommended half mask:-** Particle filtering: EN149:2001 (or AUS/NZ equivalent)

When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

## Section 9 - Physical and Chemical Properties

#### Information on basic physical and chemical properties

<b>Physical State</b>	Solid	
<b>Appearance</b>	Grey	
<b>Odor</b>	Odorless	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	Not applicable	
<b>Melting Point/Range</b>	327.4 °C / 621.3 °F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	1740 °C / 3164 °F	
<b>Flammability (liquid)</b>	Not applicable	Solid
<b>Flammability (solid,gas)</b>	No information available	
<b>Explosion Limits</b>	No data available	
<b>Flash Point</b>	No information available	<b>Method -</b> No information available
<b>Autoignition Temperature</b>	Not applicable	
<b>Decomposition Temperature</b>	No data available	
<b>Viscosity</b>	Not applicable	Solid
<b>Water Solubility</b>	Insoluble	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		

Vapor Pressure	No data available	
Density / Specific Gravity	11.3	
Bulk Density	No data available	
Vapor Density	Not applicable	Solid
Particle characteristics	No data available	

**Other information**

Molecular Formula	Pb
Molecular Weight	207.19
Evaporation Rate	Not applicable - Solid

## **Section 10 - Stability and Reactivity**

Reactivity	None known, based on information available
Stability	Stable under normal conditions.
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	No information available.
Conditions to Avoid	Exposure to air, Incompatible products.
Incompatible Materials	Strong acids, Ammonium nitrate: fertilizers capable of self-sustaining decomposition, Peroxides, Metals, Finely powdered metals.
Hazardous Decomposition Products	Lead. lead oxides.

## **Section 11 - Toxicological Information**

**Acute Effects****Information on likely routes of exposure****Product Information**

Inhalation	Not an expected route of exposure.
Eyes	Not an expected route of exposure.
Skin	No known effect based on information supplied.
Ingestion	Not an expected route of exposure.

**Numerical measures of toxicity**

(a) acute toxicity;	
Oral	Category 4
Dermal	No data available
Inhalation	Category 4
(b) skin corrosion/irritation;	No data available
(c) serious eye damage/irritation;	No data available

**(d) respiratory or skin sensitization;**

**Respiratory** No data available  
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** No data available

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	New Zealand	Australia	New South Wales	Western Australia	IARC	EU	UK	Germany
Lead	Suspected carcinogen				Group 2A			

**(g) reproductive toxicity;  
Reproductive Effects**

Category 1A  
 May cause harm to the unborn child Possible risk of impaired fertility

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** Category 2

**Target Organs** No information available.

**(j) aspiration hazard;** Not applicable  
 Solid

**Symptoms / effects, both acute and delayed**

No information available.

## Section 12 - Ecological Information

**Ecotoxicity****Aquatic ecotoxicity**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Lead	LC50: = 1.32 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 1.17 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: = 0.44 mg/L, 96h semi-static (Cyprinus carpio)	EC50: = 600 µg/L, 48h (water flea)		

**Terrestrial ecotoxicity** There is no data for this product

**Persistence and Degradability** Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary

**Persistence** Insoluble in water, May persist.

<b>Degradability</b>	Not relevant for inorganic substances.
<b>Degradation in sewage treatment plant</b>	Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.
<b>Bioaccumulative Potential</b>	May have some potential to bioaccumulate Product has a high potential to bioconcentrate
<b>Mobility</b>	Spillage unlikely to penetrate soil. Is not likely mobile in the environment due its low water solubility.
<b><u>Other adverse effects</u></b>	
<b>Endocrine Disruptor Information</b>	This product does not contain any known or suspected endocrine disruptors
<b>Persistent Organic Pollutant</b>	This product does not contain any known or suspected substance
<b>Ozone Depletion Potential</b>	This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

### Waste treatment methods

<b>Waste from Residues/Unused Products</b>	Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.
<b>Contaminated Packaging</b>	Dispose of this container to hazardous or special waste collection point.
<b>Other Information</b>	Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations . Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

## Section 14 - Transport Information

<b><u>NZS 5433:2020</u></b>	Not regulated
<b><u>IATA</u></b>	Not regulated
<b><u>IMDG/IMO</u></b>	Not regulated
<b>Environmental hazards</b>	Dangerous for the environment Product is a marine pollutant according to the criteria set by IMDG/IMO
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable, packaged goods
<b>Special Precautions</b>	No special precautions required. Please refer to the applicable dangerous goods regulations for additional information.
<b>Additional information</b>	None known

## Section 15 - Regulatory Information



**Safety, health and environmental regulations/legislation specific for the substance or mixture**

<b>HSNO Approval Number</b>	HSR002809
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**National Regulations**

There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

**Certified handlers, tracking and controlled substance license requirements**

Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information. Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information.

**Prohibition or notification/licensing requirements**

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

<b>Component</b>	<b>New Zealand</b>
Lead	Suspected carcinogen

**International Regulations**

**Ozone Depletion Potential** This product does not contain any known or suspected substance

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Rotterdam Convention (PIC)** Not applicable

**Authorisation/Restrictions according to EU REACH**

<b>Component</b>	<b>REACH (1907/2006) - Annex XIV - Substances Subject to Authorization</b>	<b>REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances</b>	<b>REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)</b>
Lead	-	Use restricted. See item 72. (see link for restriction details) Use restricted. See item 30. (see link for restriction details) Use restricted. See item 63. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	SVHC Candidate list - 231-100-4 - Toxic for reproduction (Article 57c)

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

<https://echa.europa.eu/authorisation-list>

<https://echa.europa.eu/candidate-list-table>

<https://echa.europa.eu/substances-restricted-under-reach>

**International Inventories**

New Zealand (NZIoC), Australia (AICS), Europe (EINECS/ELINCS/NLP), Korea (KECL), China (IECSC), Taiwan (TCSI), Japan (ENCS), Japan (ISHL), Canada (DSL/NDL), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

<b>Component</b>	<b>CAS No</b>	<b>NZIoC</b>	<b>AICS</b>	<b>EINECS</b>	<b>ELINCS</b>	<b>NLP</b>	<b>KECL</b>	<b>IECSC</b>	<b>TCSI</b>
Lead	7439-92-1	X	X	231-100-4	-	-	KE-21887	X	X

<b>Component</b>	<b>CAS No</b>	<b>TSCA</b>	<b>TSCA Inventory notification -</b>	<b>DSL</b>	<b>NDL</b>	<b>PICCS</b>	<b>ISHL</b>	<b>ENCS</b>
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			Active-Inactive					
Lead	7439-92-1	X	ACTIVE	X	-	X	-	X

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

## Section 16 - Other Information

This safety data sheet complies with the requirements of the EPA Hazardous Substances (Hazard Classification) Notice 2020 and WorkSafe New Zealand Regulations

### Legend

NZIoC - New Zealand Inventory of Chemicals

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - Chinese Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

NZS 5433:2020 - Transport of Dangerous Goods on Land

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

WEL - Workplace Exposure Limit

DNEL - Derived No Effect Level

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

VOC - (Volatile Organic Compound)

AICS - Australian Inventory of Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

CAS - Chemical Abstracts Service

ACGIH - American Conference of Governmental Industrial Hygienists

PNEC - Predicted No Effect Concentration

OECD - Organisation for Economic Co-operation and Development

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ADG - Australian Code for the Transport of Dangerous Goods by Road and Rail

LC50 - Lethal Concentration 50%

ATE - Acute Toxicity Estimate

RPE - Respiratory Protective Equipment

NOEC - No Observed Effect Concentration

BCF - Bioconcentration factor

PBT - Persistent, Bioaccumulative, Toxic

### Key literature references and sources for data

HSNO classifications provided in the New Zealand Chemical Classification Information Database (CCID).

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadviser - LOLI, Merck index, RTECS

EPA Guide to classifying hazardous substances in New Zealand

EPA - Assigning a product to an existing HSNO approval guide

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

### Revision Date

14-Jul-2023

### Revision Summary

Update to GHS format

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

## End of Safety Data Sheet