

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 9.2

Revision Date 12.03.2025

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Lead

Product Number : GF57430638

Brand : Aldrich

Index-No. : 082-014-00-7

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.

CAS-No. : 7439-92-1

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

### 1.3

### 1.4 Emergency telephone

Emergency Phone # : 000 800 1007 141 (CHEMTREC)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

|                                                                                                                        |                                                                                    |
|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Reproductive toxicity, (Category 1A)                                                                                   | H360FD: May damage fertility. May damage the unborn child.                         |
| Effects on or via lactation                                                                                            | H362: May cause harm to breast-fed children.                                       |
| Specific target organ toxicity - repeated exposure, (Category 1), Central nervous system, Blood, Immune system, Kidney | H372: Causes damage to organs through prolonged or repeated exposure if swallowed. |

Short-term (acute) aquatic hazard, (Category 1)

H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, (Category 1)

H410: Very toxic to aquatic life with long lasting effects.

## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Danger

Hazard Statements

H360FD

May damage fertility. May damage the unborn child.

H362

May cause harm to breast-fed children.

H372

Causes damage to organs (Central nervous system, Blood, Immune system, Kidney) through prolonged or repeated exposure if swallowed.

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.

P263

Avoid contact during pregnancy and while nursing.

P264

Wash skin thoroughly after handling.

P273

Avoid release to the environment.

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard Statements

none

Restricted to professional users.

"As from 24 August 2023 adequate training is required before industrial or professional use."

### Reduced Labeling (<= 125 ml)

Pictogram

Signal Word

Danger

Hazard Statements

H362

May cause harm to breast-fed children.

H372

Causes damage to organs through prolonged or repeated exposure if swallowed.

H360FD

May damage fertility. May damage the unborn child.

Precautionary Statements

P202

Do not handle until all safety precautions have been read and understood.

P260

Do not breathe dust.

P264

Wash skin thoroughly after handling.

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard Statements

none

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula : Pb  
Molecular weight : 207,20 g/mol  
CAS-No. : 7439-92-1  
EC-No. : 231-100-4  
Index-No. : 082-014-00-7

| Component                                                                                                                               | Classification                                                                                                                    | Concentration |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>Lead</b> Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH) |                                                                                                                                   |               |
| CAS-No. 7439-92-1<br>EC-No. 231-100-4<br>Index-No. 082-014-00-7                                                                         | Repr. 1A; Lact. ; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H360FD, H362, H372, H400, H410<br>M-Factor - Aquatic Chronic: 10 | <= 100 %      |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

#### **4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

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

##### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

#### **5.2 Special hazards arising from the substance or mixture**

Lead oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

#### **5.3 Advice for firefighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### **5.4 Further information**

Suppress (knock down) gases/vapors/mists with a water spray jet.

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### **SECTION 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.  
For personal protection see section 8.

#### **6.2 Environmental precautions**

No special precautionary measures necessary.

#### **6.3 Methods and materials for containment and cleaning up**

Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

#### **6.4 Reference to other sections**

For disposal see section 13.

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### **SECTION 7: Handling and storage**

#### **7.1 Precautions for safe handling**

##### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture.

##### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

### Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

### 8.2 Exposure controls

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

##### Body Protection

protective clothing

##### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Control of environmental exposure**

No special precautionary measures necessary.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

|                                                 |                                                                                  |
|-------------------------------------------------|----------------------------------------------------------------------------------|
| a) Physical state                               | solid                                                                            |
| b) Color                                        | No data available                                                                |
| c) Odor                                         | No data available                                                                |
| d) Melting point/freezing point                 | Melting point: 326 °C at ca.1.013 hPa - OECD Test Guideline 102                  |
| e) Initial boiling point and boiling range      | 1.740 °C                                                                         |
| f) Flammability (solid, gas)                    | No data available                                                                |
| g) Upper/lower flammability or explosive limits | No data available                                                                |
| h) Flash point                                  | Not applicable                                                                   |
| i) Autoignition temperature                     | No data available                                                                |
| j) Decomposition temperature                    | No data available                                                                |
| k) pH                                           | No data available                                                                |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| m) Water solubility                             | 0,185 g/l at 20 °C at 1.013 hPa - OECD Test Guideline 105- partly soluble        |
| n) Partition coefficient: n-octanol/water       | Not applicable for inorganic substances                                          |
| o) Vapor pressure                               | No data available                                                                |
| p) Density                                      | 11,45 g/cm <sup>3</sup> at 23,8 °C at 1.013 hPa - OECD Test Guideline 109        |
| Relative density                                | 11,45 at 23,8 °C - OECD Test Guideline 109                                       |
| q) Relative vapor density                       |                                                                                  |
| r) Particle characteristics                     | No data available                                                                |
| s) Explosive properties                         | Not classified as explosive.                                                     |
| t) Oxidizing properties                         | none                                                                             |

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 423)

LC50 Inhalation - Rat - male and female - 4 h - > 5,05 mg/l - dust/mist

(OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 72 h

(OECD Test Guideline 405)

#### Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Test Type: Micronucleus test

Species: Rat

Cell type: Red blood cells (erythrocytes)

Application Route: Oral

Result: positive

Remarks: (ECHA)

Test Type: comet assay  
Species: Mouse  
Cell type: Liver cells  
Application Route: Inhalation

Result: negative  
Remarks: (ECHA)

Test Type: Micronucleus test  
Species: Mouse  
Cell type: Bone marrow  
Application Route: Oral

Result: Positive results were obtained in some in vivo tests.  
Remarks: (ECHA)

Test Type: Chromosome aberration test in vitro  
Species: Monkey  
Cell type: lymphocyte  
Application Route: Oral

Result: Positive results were obtained in some in vivo tests.  
Remarks: (ECHA)

**Carcinogenicity**  
No data available

**Reproductive toxicity**  
May damage the unborn child. Positive evidence from human epidemiological studies.  
May damage fertility. Positive evidence from human epidemiological studies. Studies indicating a hazard to babies during the lactation period

**Specific target organ toxicity - single exposure**  
No data available

**Specific target organ toxicity - repeated exposure**  
Oral - Causes damage to organs through prolonged or repeated exposure.  
- Central nervous system, Blood, Immune system, Kidney

**Aspiration hazard**  
No data available

## 11.2 Additional Information

### Endocrine disrupting properties

#### Product:

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

anemia

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

On the basis of the morphology of the product, no hazardous properties are to be expected when it is handled and used with appropriate care.

Handle in accordance with good industrial hygiene and safety practice.

## 12.1 Toxicity

## 12.2 Persistence and degradability

Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Oncorhynchus kisutch - 2 Weeks  
- 150 µg/l(Lead)

## 12.4 Mobility in soil

## 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Product:**

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Discharge into the environment must be avoided.

### 13.1 Waste treatment methods

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

### 14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

### 14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

#### Further information

Not classified as dangerous in the meaning of transport regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### Authorisations and/or restrictions on use

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Lead

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REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Lead

#### National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E1

ENVIRONMENTAL HAZARDS

#### **Other regulations**

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

#### **15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

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### **SECTION 16: Other information**

#### **Full text of H-Statements**

|        |                                                                              |
|--------|------------------------------------------------------------------------------|
| H360FD | May damage fertility. May damage the unborn child.                           |
| H362   | May cause harm to breast-fed children.                                       |
| H372   | Causes damage to organs through prolonged or repeated exposure if swallowed. |
| H400   | Very toxic to aquatic life.                                                  |
| H410   | Very toxic to aquatic life with long lasting effects.                        |

CHEMIKART

## Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

## Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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