

1. Identification of the substance / mixture and of the company / undertaking

1.1 Product identifier

Product name: Lead
CAS-No.: 7439-92-1
EC-No.: 231-100-4

1.2 Relevant identified uses of the substance or mixture

Identified use: Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Company: NETZSCH-Gerätebau GmbH
Wittelsbacherstraße 42
95100 Selb / Germany

Customer service Phone: +49 9287 881-555

1.4 Emergency Phone: +49 9287 881-174 (during office hours)

Fax: +49 9287 881-505

E-mail Address: service@ngb.netzsch.com

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Repr. 1A	H360FD May damage fertility. May damage the unborn child
Reproductive toxicity, Additional category, Effects on or via lactation	H362 May cause harm to breast-fed children
STOT RE 2	H373 May cause damage to organs through prolonged or repeated exposure.
Aquatic Acute 1	H400 Very toxic to aquatic life.
Aquatic Chronic 1	H410 Very toxic to aquatic life with long lasting effects.
Acute Tox. 4	H302 Harmful if swallowed.
Acute Tox. 4	H332 Harmful if inhaled.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms:



Signalword: Danger

Hazard statements:	H302+H332 Harmful if swallowed or if inhaled. H360FD May damage fertility. May damage the unborn child H362 May cause harm to breast-fed children H373 May cause damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements:	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P273 Avoid release to the environment. P308+P313 IF exposed or concerned: Get medical advice/attention. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Additional information:	-

2.3 Other hazards

All chemicals are potentially dangerous.
They are therefor only be handled by specially trained personnel with the necessary care.

Results of PBT- und vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3. Composition / information on ingredients

3.1 Chemical characterization:

Substances

CAS-No. Description: 7439-92-1 lead

Identification number(s):

EC number: 231-100-4

Formula: Pb

Molar mass [g/mol]: 207,2

4. First aid measures

4.1 Description of first aid measures

General information:	Consult a physician. Show this safety data sheet to the doctor in attendance. Remove any clothing soiled by the product.
After inhalation:	Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
After skin contact:	Wash off with soap and plenty of water. If skin irritation continues, consult a doctor.
After eye contact:	To be sure rinse opened eye under running water for at least 15 minutes. Consult a physician.
After swallowing:	Rinse out mouth and drink a glass of water. Do not induce vomiting. Try not to vomit. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Anemia.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5. Fire-Fighting measures

5.1 Extinguishing agents

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
CO₂, powder or water spray.
Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

In the event of fire development of hazardous combustion gases or vapours possible.
Product non-combustible.
Ambient fire may liberate hazardous vapours.

In case of fire, the following can be released:

Lead Oxides

5.3 Advice for firefighters

Protective equipment: Mouth respiratory protective device.
Wear self-contained respiratory protective device.
Wear fully protective suit.

Additional information: Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe dust.
Ensure adequate ventilation.
Avoid formation of dust.

6.2 Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ground water or penetrate the soil.
Keep contaminated washing water and dispose of appropriately.

6.3 Methods and material for containment and cleaning up

Pick up mechanically.
Clean the affected area carefully.
Dispose of the material collected according to regulations.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. Handling and storage

7.1 Precautions for safe handling

Handling corresponding to laboratory safety guidelines.
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Handle and open container with care.

Information about fire and explosion protection:

Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be safe storage,
including any incompatibilities: No special requirements.

Information about storage in one
common storage facility: Store away from foodstuffs.

Further information about
storage conditions: Store in dry conditions.
Store under lock and key and with access restricted to technical
experts or their assistants only.
Keep container tightly sealed.

Recommended storage
temperature: 15-25 °C

7.3 Specific end use(s)

No further relevant information available.

8. Exposure controls / personal protection

Additional information about
design of technical facilities: No further data; see item 7.

8.1 Control parameters

Ingredients with limit
values that require
monitoring at the workplace: Not required.

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:	<p>Do not eat, drink or smoke while working. Do not breathe dust. Pregnant women should strictly avoid inhalation or skin contact. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.</p>
Individual protection measures:	<p>Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.</p>
Respiratory protection:	<p>Required when dusts are generated: filter P2. In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.</p>
Protection of hands:	<p>Protective gloves: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Material: Nitrile</p>
Eye protection:	<p>Tightly sealed goggles</p>
Body protection:	<p>Protective work clothing</p>

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

<u>Appearance</u> Form: Colour:	Solid Silver grey
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	Not applicable.
<u>Change in condition</u> Melting point / Melting range: Boiling point / Boiling range:	327.5°C 1740°C
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Ignition temperature:	No information available.
Decomposition temperature:	Not determined.
Self-igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
<u>Explosion limits</u> Lower: Upper:	Not determined. Not determined.
Vapour pressure at 970°C:	1.33 hPa
Density at 20°C:	11.35 g/cm ³
Relative density:	Not determined.
Vapour density:	Not applicable.
Evaporation rate:	Not applicable.
Solubility in / Miscibility with water:	Insoluble.
Partition coefficient (n-octanol / water):	Not determined.
<u>Viscosity</u> Dynamic: Kinematic:	Not applicable. Not applicable.

9.2 Other information

No further relevant information available.

10. Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

Fluorine, strong acids, azides, picrates.

10.6 Hazardous decomposition products

In case of fire: see item 5.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD / LC50 values relevant
for classification:

Quantitative data on the toxicity of this product are not
available.

Potential health effects

Skin:	Harmful if absorbed through skin. May cause skin irritation.
Eyes:	May cause eye irritation.
Inhalation:	Harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Harmful if swallowed.
Sensitization:	No information available.

CMR effects

Germ cell mutagenicity:	Genotoxicity in vivo - rat - Inhalation Cytogenetic analysis
Carcinogenicity:	Limited evidence of carcinogenicity in animal studies
Reproductive toxicity:	Suspected human reproductive toxicant Reproductive toxicity - rat - Inhalation Effects on Newborn: Biochemical and metabolic. Reproductive toxicity - rat - Oral Effects on Newborn: Behavioral.

Reproductive toxicity - mouse - Oral
 Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).

Developmental Toxicity - rat - Inhalation
 Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow).

Developmental Toxicity - rat - Oral
 Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow). Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Developmental Toxicity - rat - Oral
 Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.

Developmental Toxicity - mouse - Oral
 Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.

Aspiration hazard:

No data available.

Specific target organ toxicity – single exposure:

No data available.

Specific target organ toxicity – repeated exposure:

May cause damage to organs through prolonged or repeated exposure. Because of poor absorbability via the gastrointestinal tract, only very high doses lead to acute cases of intoxication. After latency period of several hours, metallic taste, nausea, vomiting, shock.

Target organs:

Central nervous system, immune system, blood, kidney.

Additional toxicological information:

No data available.

Further information:

The product should be handled with the usual care as necessary for chemicals.

12. Ecological information

12.1 Toxicity

Aquatic toxicity

Daphnia toxicity		Fish toxicity	
LC50	4.46 mg/l/48 h (Daphnia magna) (GESTIS)	LC50	2.8 mg/l/ 96 h (fis) (GESTIS)

12.2 Persistence and degradability

Persistence: No data available.

Degradability: No data available.

12.3 Bioaccumulative potential

Oncorhynchus kisutch - 2 Weeks -150 _g/l
Bioconcentration factor (BCF): 12

12.4 Mobility in soil

No data available.

Ecotoxicological effects

Remark: Do not allow to enter waters, waste water, or soil! Very toxic to aquatic life with long lasting effects.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects

No further relevant information available.

13. Disposal considerations






13.1 Waste treatment methods

Recommendation: Dispose of residual amounts and non-reusable solutions in accordance with local legal regulations. Waste codes must be assigned by the user based on the application for which the product was used.
Waste code must be classified as hazardous.

Uncleaned packaging

Recommendation: Disposal same as for unused product.

14. Transport information

	ADR	IMDG	IATA
14.1 UN-Number	UN3077	UN3077	UN3077
14.2 UN proper shipping name	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (lead)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (lead)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (lead)
14.3 Transport hazard class(es) / -label			
14.4 Packing group:	III	III	III
Transport hazard class(es):	9 Miscellaneous dangerous substances and articles.	9 Miscellaneous dangerous substances and articles.	9 Miscellaneous dangerous substances and articles.
Label:	9	9	9
danger symbol:	 		 
14.5 Environmental hazards:	no	no	no

14.6 Special precautions for user

Warning: Miscellaneous dangerous substances and articles.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

15. Regulatory information

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

National regulations:

Information about limitation of use: Employment restrictions concerning juveniles must be observed.

Waterhazard class: Generally not hazardous for water (German regulation).

Information in accordance with article 33 of the 1907/2006/EG regulation
Lead (CAS 7439-92-1) has been identified as a substance of very high concern in accordance with article 59.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

16. Other Information

Guarantee

This information has been compiled to the best of our knowledge; however, we make no claim as to its completeness and it is meant to serve only as a guideline. NETZSCH-Gerätebau GmbH disclaims any liability for damages which may occur in handling or in contact with these chemicals.

Disclaimer

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