

# SAFETY DATA SHEET

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

### 1.1. Product identifier

**Trade name**

Lead, alloyed (massive, particle diameter  $\geq 1\text{mm}$ )

**Product no.**

-

**REACH registration number**

Not applicable

**Other means of identification**

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

**Relevant identified uses of the substance or mixture**

Uses considered in Exposure Scenarios:

- 1 Primary Lead Production
- 2 Secondary Lead Production
- 3 Lead Battery Production
- 4 Lead Sheet Production
- 5 Use of Lead in production of Hot-Dip Galvanised Steel
- 6 Use of Lead Metal in production of a range of lead articles (e.g. cast, rolled and extruded production, ammunition and lead shot)
- 7 Use of lead in the production of leaded steels
- 8 Lead powder production
- 9 Use of lead metal in lead oxide production
- 10 Use of molten lead as heat transfer fluid in closed process
- 11 Professional use of lead solder
- 12 Use of lead as a laboratory agent and in chemical analysis
- 13 Use of lead metal in the production of leaded copper

**Uses advised against**

The placing on the market for supply to the general public is prohibited for 'Lead metal massives (general and high purity grades)' on its own and in mixtures at 0.3% or more Pb by weight. As such, the consumer use of lead solder is a use advised against.

In accordance with the CSR, the use of lead shot over wetlands is a use advised against.

### 1.3. Details of the supplier of the safety data sheet

**Company and address**

Boliden Commercial  
Box 750  
SE-101 35 Stockholm  
Sweden

Tel +46 8 610 15 00

**Contact person**

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**E-mail**

info.market@boliden.com

**SDS date**

2022-11-28

**SDS Version**

2.0

According to EC-Regulation 1907/2006 (REACH)

## 1.4. Emergency telephone number

999 (or 111 for non-emergency medical advice). Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department or the NHS enquiry service). See section 16.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Lead metal massives (general and high purity grades); [particle diameter  $\geq 1\text{mm}$ ]  
 Repr. 1A; H360FD  
 Lact.: H362  
 STOT RE1; H372.

### 2.2. Label elements

#### Hazard pictogram(s)



#### Signal word

Danger

#### Hazard statement(s)

May damage fertility. May damage the unborn child. (H360FD)  
 May cause harm to breast-fed children. (H362)  
 Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure by oral intake or inhalation. (H372)

<b>Safety statement(s)</b>	General	-
	Prevention	Do not breathe dust or fume (P260) Use personal protective equipment as required. (P281) Avoid contact during pregnancy and while nursing (P263)
	Response	If exposed or concerned: Get medical advice/attention (P308 + P313)
	Storage	-
	Disposal	Dispose of contents/container to an approved waste disposal plant (P501).

#### Identity of the substances primarily responsible for the major health hazards

Lead

*† A derogation from labelling requirements exists for metals in massive form. Such metals do not require a label according to Annex 1 to Regulation (EC) No 1272/2008 if they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market, although classified as hazardous in accordance with the criteria of that Annex.*

### 2.3. Other hazards

Lead in massive form is not a significant health hazard. However, melting or activities generating lead dust, fume or vapour can result in sufficient lead entering your body to be hazardous to your health. Oxidation products (including lead compounds) may also form on the surface of metallic lead. Lead is heavy and care should be taken when lifting and handling. See section 11 for more information on the health hazards of lead compounds.

#### Additional labelling

Labelling according to REACH Annex XVII, Entry 30: 'Restricted to professional users'.

#### Additional warnings

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#### VOC

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## SECTION 3: Composition/information on ingredients

According to EC-Regulation 1907/2006 (REACH)

## 3.1. Substances

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## 3.2. Mixtures

NAME:	Lead metal massives (general and high purity grades); [particle diameter ≥1mm]
IDENTIFICATION NOS.:	CAS-no: 7439-92-1 EC-no: 231-100-4 REACH-no: 01-2119513221-59-0040
CONTENT:	≥90 - ≤99.99%
CLP CLASSIFICATION:	Repr. 1A; H360FD, Lact.: H362, STOT RE1; H372
Specific concentration limit	Not applicable
M-factor	Not applicable
Acute Toxicity Estimate	Oral: >2000 mg/kg Inhalation (dust): >5 mg/l Dermal: >2000 mg/kg Substance is not classified for acute toxicity

NAME:	tin
IDENTIFICATION NOS.:	CAS-no: 7440-31-5 EC-no: 231-141-8
CONTENT:	0 - ≤5%
CLP CLASSIFICATION:	NA

NAME:	antimony
IDENTIFICATION NOS.:	CAS-no: 7440-36-0 EC-no: 231-146-5
CONTENT:	0 - ≤1%
CLP CLASSIFICATION:	NA

NAME:	copper
IDENTIFICATION NOS.:	CAS-no: 7440-50-8 EC-no: 231-159-6
CONTENT:	0 - ≤0.2%
CLP CLASSIFICATION:	NA

NAME:	aluminium
IDENTIFICATION NOS.:	CAS-no: 7429-90-5 EC-no: 231-072-3 Index-no: 013-002-00-1
CONTENT:	0 - ≤0.2%
CLP CLASSIFICATION:	NA

NAME:	calcium
IDENTIFICATION NOS.:	CAS-no: 7440-70-2 EC-no: 231-179-5 Index-no: 020-001-00-X
CONTENT:	0 - ≤0.2%
CLP CLASSIFICATION:	Water-react. 2 H261

(\*) See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

## Other informations

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

The measures below are unlikely to be relevant whilst lead is in its solid metallic state. However, they are relevant in the event of exposure to fumes, vapour or dust or oxidation products that may form on the surface of lead.

#### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor, if in doubt about the injured person's condition or if the symptoms continue. Never give an unconscious person water or similar.

#### Inhalation

Get the person into fresh air and stay with them.

#### Skin contact

Remove contaminated clothing and shoes at once. Skin that has come in contact with the material must be washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

#### Eye contact

Remove contact lenses. Flush eyes immediately with plenty of water (20-30°C) and continue until irritation stops. Make sure you flush under the upper and lower eyelids. If irritation continues, contact a doctor.

#### Ingestion

Rinse out mouth and give plenty of water to drink. Contact a doctor immediately and take this safety data sheet or the label from the material with you. Do not induce vomiting. In the event of spontaneous vomiting,

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hold head facing down so that no vomit runs back into the mouth and throat.

#### **Burns**

Rinse with water until the pain stops and continue for 30 minutes.

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

Typical clinical manifestations of acute lead poisoning include weakness, irritability, asthenia, nausea, abdominal pain with constipation, and anaemia.

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

Symptoms of poisoning may occur after several hours; seek medical attention.

#### **Information to medics**

Bring this safety data sheet.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding. Never use water in presence of molten metal. Water expands explosively in contact with molten / liquid metal.

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

In case of fires, hazardous combustion gases are formed: Lead fumes; Lead oxide.

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

Wear self-contained breathing apparatus and protective clothing to prevent contact.

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

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

Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.

### **6.2. Environmental precautions**

Do not discharge into the drains/surface waters/groundwater. In case of entry into waterways, soil or drains, inform the responsible authorities.

### **6.3. Methods and material for containment and cleaning up**

Collect mechanically (preferably in dry condition). Send in suitable containers for recovery or disposal.

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

See section on "Disposal considerations" with regard to the handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

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

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

See section on 'Exposure controls/personal protection' for information on personal protection. The product is not combustible.

### **7.2. Conditions for safe storage, including any incompatibilities**

Do not store together with foodstuffs. Do not store together with animal feedstocks. Do not store with acids or alkalis.

#### **Storage temperature**

No data available.

### **7.3. Specific end use(s)**

This product should only be used for applications described in Section 1.2

## **SECTION 8: Exposure controls/personal protection**

### **8.1. Control parameters**

#### **OEL**

aluminium (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): - ppm | 10 mg/m<sup>3</sup>

Short-term exposure limit (15-minute reference period): - ppm | 4 mg/m<sup>3</sup>

According to EC-Regulation 1907/2006 (REACH)

copper (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): - ppm | 0.2/1 mg/m<sup>3</sup>

Short-term exposure limit (15-minute reference period): - ppm | -/2 mg/m<sup>3</sup>

Comments: Fume/dust

antimony (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): - ppm | 0.5 mg/m<sup>3</sup>

Short-term exposure limit (15-minute reference period): - ppm | - mg/m<sup>3</sup>

lead (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): - ppm | 0.15 mg/m<sup>3</sup>

Short-term exposure limit (15-minute reference period): - ppm | - mg/m<sup>3</sup>

## DNEL / PNEC

DNEL workers (lead): 40 µg/dL blood (adults) - Duration: Long term – Systemic effects

DNEL workers (lead): 10 µg/dL blood (developmental effect on foetus) - Duration: Long term – Systemic effects

PNEC (lead): 2.4 µg Pb/L (dissolved) - Exposure: Freshwater

PNEC (lead): 3.3 µg Pb/L (dissolved) - Exposure: Marine water

PNEC (lead): 186 mg Pb/kg dw - Exposure: Freshwater sediment

PNEC (lead): 49.7 mg Pb/kg dw (bioavailability correction) - Exposure: Freshwater sediment

PNEC (lead): 168 mg Pb/kg dw - Exposure: Marine water sediment

PNEC (lead): 212.0 mg Pb/kg dw - Exposure: Soil

PNEC (lead): 0.1 mg Pb/L - Exposure: Sewage Treatment Plant

## 8.2. Exposure controls

Compliance with the stated exposure limits values should be checked on a regular basis.

Blood lead monitoring: Set in place a certified monitoring regime which covers all site activities; Define a policy for submitting workers to regular blood lead monitoring, including increased frequency for workers undertaking high-risk jobs and workers with elevated blood lead levels; Ensure all workers have a blood test prior to working on site. Set an “action level” that is typically 5 µg/dL below the exposure limit deemed to be safe. If the action level is exceeded, appropriate measures are to be taken, to prevent further increases in blood lead. If the safe threshold is exceeded, continue or begin ban on overtime, ensure strict hygiene procedures are followed, undertake detailed inspections to ensure correct use of personal protective equipment, undertake detailed inspections to ensure recommended workplace procedures are followed, move employee to workplace where exposure is expected to be lower or remove from lead environment altogether, further increase blood lead sampling frequency, and continue frequent sampling until results are below the first action level.

### General recommendations

Observe general occupational hygiene.

### Exposure scenarios

If there is an appendix to this safety data sheet, the indicated exposure scenarios must be complied.

### Exposure limits

Trade users are covered by the rules of the working environment legislation on maximum concentrations for exposure. See work hygiene threshold values.

### Appropriate technical measures

Airborne gas and dust concentrations must be kept as low as possible and below the current threshold values. Use for example an exhaust system if the normal air flow in the work room is not sufficient. Make sure that eyewash and emergency showers are clearly marked.

### Hygiene measures

Personal Hygiene: Ensure workers follow simple hygiene rules (e.g. do not bite nails and keep them cut short, avoid touching or scratching face with dirty hands or gloves); Ensure workers do not wipe away sweat with hands or arms; Ensure workers use disposable tissues rather than a handkerchief; Prohibit drinking, eating and smoking in production areas, or access to eating and non-production areas in working clothes; Ensure workers wash hands, arms, faces and mouths (but preferably shower) and change into clean clothing before entering eating areas; For high exposure workplaces, separate rooms for cleaning hands, removal of clothes, showers and clean clothes may be necessary; Ensure workers handle dirty working clothes with care; Allow no personal belongings to be taken into production areas, or items that have been used in production areas to be taken home. Ensure general shop cleanliness is maintained by frequent washing/vacuuming. Clean every workplace at the end of every shift.

### Measures to avoid environmental exposure

One or more of the following measures may if necessary be taken to reduce emissions to water:

- Chemical precipitation: used primarily to remove the metal ions

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- Sedimentation
- Filtration: used as final clarification step
- Electrolysis: for low metal concentration
- Reverse osmosis: extensively used for the removal of dissolved metals
- Ion exchange: final cleaning step in the removal of heavy metal from process wastewater

One or more of the following measures may if necessary be taken to reduce emissions to air:

- Electrostatic precipitators using wide electrode spacing: Wet electrostatic precipitators:
- Cyclones, but as primary collector Fabric or bag filters: high efficiency in controlling fine particulate (melting): achieve emission values Membrane filtration techniques can achieve
- Ceramic and metal mesh filters. PM10 particles are removed
- Wet scrubbers

Lead removal from treatment works should be at least the minimum default 84% removal used in the CSR. Solid material collected from on-site treatment must be sent for metal recovery or treated as hazardous waste. Waste water treatment sludge must be recycled, incinerated or landfilled and not used as agricultural fertiliser.

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



#### Generally

Only CE-marked personal protection equipment should be used.

#### Respiratory Equipment

Suitable respiratory protective device recommended if work activity is likely to result in formation of lead fumes, vapours or dust. In case of brief or low level exposure use dust mask or half mask with particle filter P2. Assess the need to wear respiratory protective equipment in production areas. Consider use effective masks accompanied by a compliance policy (ensure proper shaving; ensure workers do not remove RPE in production areas in order to communicate). Where masks are used, employ formal mask cleaning and filter changing strategies.

#### Skin protection

Wear protective work clothing. For workers in areas of significant exposure, provide sufficient working clothes to enable daily change into clean clothes. In such cases all work clothing should be cleaned by the employer on a daily basis and is not permitted to leave the work site.

#### Hand protection

Protective gloves. Material of gloves: Neoprene or Leather.

#### Eye protection

Safety glasses.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Form</b> Solid	<b>Colour</b> Grey-blue	<b>Odour</b> None
<b>Melting point (°C)</b> 326	<b>Boiling point (°C)</b> > 600	<b>Flammability</b> Not classified for flammability, not ignitable
<b>Explosion limits (Vol %)</b> Not explosive	<b>Flashpoint (°C)</b> Not applicable	<b>Self ignition (°C)</b> Not applicable
<b>Decomposition temperature (°C)</b> Not applicable (substance is not self-reactive or liable to decompose)	<b>pH</b> Not applicable	<b>Viscosity</b> Not applicable

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**Solubility in water**  
Insoluble

**n-octanol/water coefficient**  
Not applicable

**Vapour pressure (mm Hg)**  
Not applicable

**Density (g/cm<sup>3</sup>)**  
11.45

**Relative vapour density**  
Not applicable (substance is solid)

**Particle characteristics**  
Substance is sold in massive form, supplied as 45 kg ingots

## 9.2. Other information

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Lead is not a reactive substance and no reactive hazards are expected.

### 10.2. Chemical stability

Expected to be stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No hazardous reactions expected under normal conditions of use.

### 10.4. Conditions to avoid

No special

### 10.5. Incompatible materials

Strong acids and strong oxidizing agents.

### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

This product has not been fully tested. Judgements on the expected toxicity of this product have been made based upon consideration of sparingly soluble inorganic lead compounds and the agreed harmonised classification of lead metal.

The following information is relevant if you swallow any lead or breathe in lead dust, fume or vapour. Lead is slowly absorbed by ingestion and inhalation and poorly absorbed through the skin. If absorbed, it will accumulate in the body with low rates of excretion, leading to long-term build up. Part of risk management is to take worker blood samples for analysis to ensure that exposure levels are acceptable.

#### Acute toxicity

Classification criteria not met. Lead metal massives is not easily inhaled or ingested, and if it is accidentally ingested, normally passes through the gastrointestinal system without significant absorption into the body. Lead is not easily absorbed through the skin.

#### Skin corrosion/irritation

Classification criteria not met. Studies have shown that sparingly soluble inorganic lead compounds are not corrosive or irritating to skin, and this lack of effect is expected also for metallic lead. This conclusion is supported by the lack of reports of irritant effects from occupational settings.

#### Serious eye damage/irritation

Classification criteria not met. Studies have shown that sparingly soluble inorganic lead compounds are not corrosive or irritating to eyes, and this lack of effect is expected also for metallic lead. This conclusion is supported by the lack of reports of irritant effects from occupational settings.

#### Respiratory or skin sensitisation

Classification criteria not met. There is no evidence that lead causes respiratory or skin sensitisation.

#### Germ cell mutagenicity

Classification criteria not met. The evidence for genotoxic effects of highly soluble inorganic lead compounds is contradictory, with numerous studies reporting both positive and negative effects. Responses appear to be induced by indirect mechanisms, mostly at very high concentrations that lack physiological relevance.

#### Carcinogenicity

There is some evidence that inorganic lead compounds may have a carcinogenic effect, and they have been classified by IARC as probably carcinogenic to humans (Group 2A). However, it is considered that this classification does not apply to lead in massive form, given the very low bioavailability of metallic lead. Carcinogenicity studies of lead metal powder have been negative. Epidemiology studies of workers exposed to

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inorganic lead compounds have found a limited association with stomach cancer. IARC has concluded that lead metal is possibly carcinogenic to humans (Group 2B).

### Reproductive toxicity

Classification as Repr. 1A. Exposure to high levels of inorganic lead compounds may cause adverse effects on male and female fertility, including adverse effects on sperm quality. Prenatal exposure to inorganic lead compounds is also associated with adverse effects on the development of the unborn child.

### STOT-single exposure

Classification criteria not met. Inorganic lead compounds have generally been found to be of relatively low acute toxicity by ingestion, in contact with skin, and by inhalation, with no evidence of any local or systemic toxicity from such exposures. The bioavailability of lead metal is low and acute lead exposure is not expected to result in acute toxicity effects.

### STOT-repeated exposure

Classification as STOT-RE 1. Lead is a cumulative poison and may be absorbed into the body through ingestion or inhalation; its toxicity is generally considered to be mediated through the lead cation. Although inhalation and ingestion of lead in massive form are unlikely, poor hygiene practises may result in hand to mouth transfer which maybe significant over a prolonged period of time. Lead metal may also be used in such a way that inhalable particles may form, resulting in systemic uptake. Inorganic lead compounds have been documented in observational human studies to produce toxicity in multiple organ systems and body function including the haematopoetic (blood) system, kidney function, reproductive function and the central nervous system. Postnatal exposure to lead compounds is associated with impacts on neurobehavioral development in children

### Aspiration hazard

Classification criteria not met. Lead metal is a solid and aspiration hazards are not expected to occur.

## 11.2 Information on other hazards

## SECTION 12: Ecological information

### 12.1. Toxicity

Substance	Species	Test	Test duration	Result
lead	Fish: Pimephales promelas, Oncorhynchus mykiss	LC50	96 h	pH 5.5 – 6.5: 40.8 – 810.0 µg Pb/L
lead	Fish: Pimephales promelas, Oncorhynchus mykiss	LC50	96 h	pH >6.5 – 7.5: 52.0 – 3,598.0 µg Pb/L
lead	Fish: Pimephales promelas, Oncorhynchus mykiss	LC50	96 h	pH > 7.5 – 8.5: 113.8 – 3,249.0 µg Pb/L
lead	Invertebrates: Daphnia magna, Ceriodaphnia dubia	LC50	48 h	pH 5.5 – 6.5: 73.6 – 655.6 µg Pb/L
lead	Invertebrates: Daphnia magna, Ceriodaphnia dubia	LC50	48 h	pH >6.5 – 7.5: 28.8 – 1,179.6 µg Pb/L
lead	Invertebrates: Daphnia magna, Ceriodaphnia dubia	LC50	48 h	pH > 7.5 – 8.5: 26.4 – 3,115.8 µg Pb/L
lead	Algae: Pseudok. subcapitata, Chlorella kesslerii	ErC50	72 h	pH 5.5 – 6.5: 72.0 – 388.0 µg Pb/L
lead	Algae: Pseudok. subcapitata, Chlorella kesslerii	ErC50	72 h	pH >6.5 – 7.5: 26.6 – 79.5 µg Pb/L
lead	Algae: Pseudok. subcapitata, Chlorella kesslerii	ErC50	72 h	pH > 7.5 – 8.5: 20.5 – 49.6 µg Pb/L
lead	Freshwater fish (different species)	EC10		17.8 – 1558.6 µg Pb/L
lead	Freshwater invertebrates (different species)	EC10		0.48 – 963.0 µg Pb/L
lead	Freshwater algae (different species)	EC10		6.1 – 190.0 µg Pb/L
lead	Freshwater higher plants: Lemna minor	EC10		85.0 – 1,025.0 µg Pb/L
lead	Marine fish: Cyprinodon variegatus	EC10		11.6 – 437.0 µg Pb/L
lead	Marine invertebrates (different species)	EC10		9.2 – 1409.6 µg Pb/L
lead	Marine algae (different species)	EC10		29.4 – 1234.0 µg Pb/L
lead	Marine higher plants: Champia parvula	EC10		11.9 µg Pb/L
lead	Freshwater sediment invertebrates (diff. species)	EC10		573.0 – 3,390.0 mg Pb/kg dw
lead	Marine sediment invertebrates (diff. species)	EC10		680.0 – 1,291.0 mg Pb/kg dw
lead	Terrestrial invertebrates (different species)	EC10		64 – 2,445.0 mg Pb/kg dw
lead	Terrestrial plants (different species)	EC10		57.0 – 6,774.0 mg Pb/kg dw
lead	Micro-organisms (different species)	EC10		97.0 – 7,880.0 mg Pb/kg dw
lead	Bacterial populations	EC10		Resp. 1.06 - 2.92 mg Pb/L
lead	Bacterial populations	EC10		Ammonia uptake 2.79 - 9.59 mg Pb/L
lead	Protozoan community	EC10		Mortality: 1.0 – 7.0 mg Pb/L

### 12.2. Persistence and degradability

Lead is naturally occurring and ubiquitous in the environment. Lead is obviously persistent in the sense that they do not degrade to CO<sub>2</sub>, water, and other elements of less environmental concern. In the water compartment, lead is rapidly and strongly bound to the suspended solids of the water column. This binding and subsequent settling to the sediment allows for rapid metal removal of lead from the water column. Insignificant remobilization of lead from sediment is expected.



According to EC-Regulation 1907/2006 (REACH)

### 12.3. Bioaccumulative potential

Available BCF/BAF data for the aquatic environment show a distinct inverse relationship with the exposure concentration demonstrating that lead is homeostatically regulated by aquatic organisms. A median BAF within environmentally relevant concentrations of 1,552 L/kgww is observed in aquatic organisms. In the soil compartment no bioaccumulation is expected. The BAF's are not significantly affected by the Pb concentration in the soil. A median BAF value for soil dwelling organisms is 0.10 kgdw/kgww. Available information on transfer of Pb through the food chain indicates that lead does not biomagnify in aquatic or terrestrial food chains.

### 12.4. Mobility in soil

Lead metal (non-classified) is sparingly soluble in water and with its relatively high Kd value, is expected to be absorbed onto soils and sediments. Typical log Kd-values of 5.2, 5.7 and 3.8 have been determined for freshwater sediment, marine sediment and soil, respectively.

### 12.5. Results of PBT and vPvB assessment

The PBT and vPvB criteria of Annex XIII to the Regulation do not apply to inorganic substances, such as lead monoxide. The criterion for persistence is not applicable for inorganic Pb. Under conditions of a standard EUSES lake, Pb meets the criteria for rapid removal from the water column (> 70% in 28 days). Bioaccumulation criterion is not applicable to inorganic substances such as Pb. However, Pb is considered to be toxic, since the most sensitive NOECs, HC5-50 and PNEC values are lower than 10 µg Pb/L.

### 12.6. Endocrine disrupting properties

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### 12.7. Other adverse effects

Lead metal (non-classified) is not expected to contribute to ozone depletion, ozone formation, global warming or acidification.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Should be recycled or disposed as hazardous waste. Do not allow product to reach sewage system. Different Pb-bearing wastes resulting from the processes described above are generated in the form of dross, flue dust and slag. These waste products are mainly recycled in the production process or landfilled.

#### Waste

EWC code  
17 04 03, 06 04 05\*

#### Specific labelling

-

#### Contaminated packing

Packaging which contains leftovers from the product must be disposed of in the same way as the product.

## SECTION 14: Transport information

Not listed as dangerous goods under ADR and IMDG regulations.

### 14.1 – 14.4

#### ADR/RID

#### 14.1. UN number

According to EC-Regulation 1907/2006 (REACH)

#### 14.2. UN proper shipping name

#### 14.3. Transport hazard class(es)

#### 14.4. Packing group

Notes

Tunnel restriction code

#### IMDG

UN-no.

Proper Shipping Name

Class

PG\*

EmS

MP\*\*

Hazardous constituent

#### IATA/ICAO

UN-no.

Proper Shipping Name

Class

PG\*

#### 14.5. Environmental hazards

-

#### 14.6. Special precautions for user

-

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

Not transported as bulk

(\*) Packing group

(\*\*) Marine pollutant

## SECTION 15: Regulatory information

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

Lead metal is included on the REACH Candidate List of Substances of Very High Concern for Authorisation (Toxic to Reproduction, Category 1A; Article 57c)

#### Restrictions for application

Annex XVII, Entry No. 30 (regarding supply to the general public)

REACH Annex XVII, Entry No. 63

#### Demands for specific education

-

#### Additional information

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#### Sources

EC regulation 1907/2006 (REACH)

Directive 2000/532/EC

EC Regulation 1272/2008 (CLP)

EH40/2005 Workplace exposure limits

### 15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this product.

## SECTION 16: Other information

### Full text of H-phrases as mentioned in section 2 and 3

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 by oral intake or inhalation.

### The full text of identified uses as mentioned in section 1

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According to EC-Regulation 1907/2006 (REACH)

## Other symbols mentioned in section 2

### Other

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

A change (in proportion to the last essential change (first cipher in SDS version)) is marked with a blue triangle.

## Emergency numbers

Austria: Vergiftungsinformationszentrale +43 (0)1 406 43 43, 112

Belgium: Antigiftcentrum +32 (0)70 245 245

Bulgaria: НАЦИОНАЛЕН ЦЕНТЪР ПО ТОКСИКОЛОГИЯ +359 2 9154 233

Czech Republic: Toxikologické informační středisko +420 224 919 293; +420 224 915 402

Denmark: Giftlinien: 82 12 12 12 (åbent 24 timer i døgnet).

Estonia: Häirekeskuse number 112, Mürgistusteabekeskuse number 16662, (+372 7943 794)

Finland: 09-4711/Myrkytystietokeskus tai suora numero 09-471977 Myrkytystietokeskus/HUS, Tukholmankatu 17, 00029 HUS (Helsinki) 112

France: centres Anti-poison Français ORFILA (INRS): + 33 (0)1 45 42 59 59. 24 heures sur 24 et 7 jours sur 7

Germany: Giftnotruf Berlin, Emergency telephone: +49 30 19240 (Tag und Nacht)

Greece: Poison Information Centre +30 210 779 3777

Hungary: Sürgősségi információszolgáltatás mérgezés: +36 80 201 199; +36 1 476 6464

Iceland: Neyðarlínan: Sími 112. Eitrunarmiðstöð Landsspítalans. Sími: 543 2222.

Ireland: Poison Information Centre +353 (0)1 809 2166

Italy: Centro antiveleni di Roma - Policlinico Umberto I tel. 06-49978000

Latvia: Valsts ugunsdzēsības un glābšanas dienests, phone number: 112. Toksikoloģijas un sepses klīnikas Saindēšanās un zāļu informācijas centrs +371 67042473

Lithuania: Visuomenės sveikatos centrams +370 5 236 20 52 arba +370 687 53378

Malta: 2425 0000

Netherlands: 30-2748888

Norway: Giftinformasjonen: 22 59 13 00

Poland: +48 58301 65 16 / +48 58 349 2831

Portugal: Em caso de intoxicacao, ligue 800 250 250

Romania: +40 21 3183606

Slovakia: +421 2 54 77 4166

Slovenia: 112

Spain: Servicio de Información Toxicológica Teléfono: + 34 91 562 04 20 (solo emergencias toxicológicas) Información en español (24h/365 días)

Sweden: 112, 010-456 6700

United Kingdom: 999 (or 111 for non-emergency medical advice). Emergency Action: In the event of a medical emergency involving this product, please contact your doctor or local hospital accident and emergency department or the NHS enquiry service)

### Date of last essential change (First cipher in SDS version)

28-11-2022

### Date of last minor change (Last cipher in SDS version)

28-11-2022