

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

Antimonial lead with arsenic (massive, particle diameter ≥ 1 mm)

Product no.

-

REACH registration number

Not applicable.

Other means of identification

Not applicable.

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
- 13 Use of lead metal in the production of leaded copper alloys

Uses advised against

The placing on the market for supply to the general public is prohibited for 'Lead metal massives with arsenic' 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

2022-11-24

SDS Version

3.0

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 with arsenic; [particle diameter $\geq 1\text{mm}$]
 Carc. 1A; H350
 Repr. 1A; H360FD
 Lact.: H362
 STOT RE1; H372.
 Aquatic Chronic 3; H412

See full text of H-phrases in section 2.2.

2.2. Label elements

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

May cause cancer. (H350)
 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)
 Harmful to aquatic life with long lasting effects (H412)

Safety statement(s)	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 and arsenic.

† 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

Melting or operations generating lead dust, fume or vapour can result in sufficient lead entering the body to be hazardous to 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

Additional labelling

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

Additional warnings

-

VOC

-

SECTION 3: Composition/information on ingredients

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: antimony
 IDENTIFICATION NOS.: CAS-no: 7440-36-0 EC-no: 231-146-5
 CONTENT: ≥1.5 – ≤10%
 CLP CLASSIFICATION: NA

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

NAME: arsenic
 IDENTIFICATION NOS.: CAS-no: 7440-38-2 EC-no: 231-148-6 Index-no: 033-001-00-X
 CONTENT: ≥0.025 – ≤1%
 CLP CLASSIFICATION: Acute Tox. 3, Aquatic Acute 1, Aquatic Chronic 1, Carc. 1A
 H301, H331, H400, H410, H350
 Specific concentration limit: Not applicable
 M-factor: M-factor acute: 1
 M-factor chronic: 1
 Acute Toxicity Estimate: Oral: 50 < ATE ≤ 300 mg/kg (Acute Tox. 3)
 Inhalation (dust): 0.5 < ATE ≤ 1.0 mg/l (Acute Tox. 3)
 Dermal: >2000 mg/kg (not classified)

NAME: copper
 IDENTIFICATION NOS.: CAS-no: 7440-50-8 EC-no: 231-159-6
 CONTENT: 0 – ≤0,2%
 CLP CLASSIFICATION: NA

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

Other informations

No other information available.

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 organic 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, 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

Clinical manifestations of 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 13 with regard to the handling of waste and section 8 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**

copper (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): - ppm | 0.2/1 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | -/2 mg/m³

Comments: Fume/dust

arsenic (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): - ppm | 0.1 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

antimony (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): - ppm | 0.5 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

lead (EH40/2005)

Long-term exposure limit (8-hour TWA reference period): - ppm | 0.15 mg/m³

Short-term exposure limit (15-minute reference period): - ppm | - mg/m³

Biological action level

Inorganic lead: 70 µg/dL (Binding Limit Value)

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): 1680 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.

According to EC-Regulation 1907/2006 (REACH) as amended by Commission Regulation (EU) 2015/830

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:

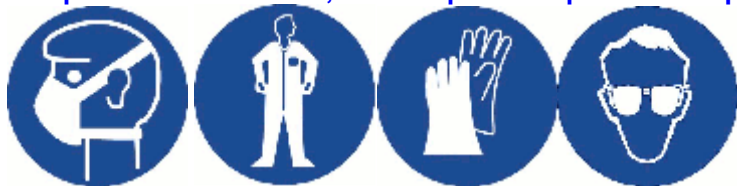
- Chemical precipitation: used primarily to remove the metal ions
- Sedimentation
- Filtration: used as final clarification step
- Electrolysis: for low metal concentration
- Reverse osmosis: extensively used for the removal of dissolved metals
- Ion exchange: final cleaning step in the removal of heavy 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

Recommended: 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

Form Solid	Colour Grey-blue	Odour None
Melting-/freezing point (°C) 326	Boiling point (°C) >600	Flammability Not classified for flammability, not ignitable
Explosion limits (Vol %) Not explosive	Flashpoint (°C) Not applicable	Self ignition (°C) Not applicable
Decomposition temperature Not applicable (substance is not self-reactive or liable to decompose)	pH Not applicable	Viscosity Not applicable
Solubility in water Insoluble	n-octanol/water coefficient Not applicable	Vapour pressure (mm Hg) Not applicable
Density (g/cm³) 11.45	Relative vapour density Not applicable (substance is solid)	Particle characteristics 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 in massive form is not considered to be acutely toxic. It 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 metallic lead causes respiratory or skin sensitisation.

Germ cell mutagenicity

Classification criteria not met. The evidence for genotoxic effects of highly soluble 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 and since lead metal powder is negative in carcinogenicity bioassays. IARC has concluded that lead metal is possibly carcinogenic to humans (Group 2B).

Reproductive toxicity

Classified 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. Sparingly soluble 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

Classified as STOT RE1. 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 may be 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 haematopoietic (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

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SECTION 12: Ecological information

12.1. Toxicity

Lead metal itself in massive form is not classified as hazardous to the aquatic environment, due to its low solubility and rapid removal from the water column. However, the presence of arsenic at 0.25 - 2.5% results in a calculated environmental classification of Aquatic Chronic 3; H412: Toxic to aquatic life with long lasting effects is calculated. T/Dp data are not available on this grade of lead metal.

The following acute and chronic Ecotoxicity Reference Values (ERVs) apply (expressed as µg dissolved Pb/L)

pH range	Reference values (µg dissolved Pb/L)	
	Acute reference value	Chronic reference value
pH 5,5-6,5	73,6 (C.dubia)	17,8 (C.carpio)
pH >6,5-7,5	37,8 (P.subcapitata)	9,0 (D.magna)
pH >7,5-8,5	20,5 (P.subcapitata)	6,1 (P.subcapitata)

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		64.0 – 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 CO₂, 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.

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/kg_{dw} 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 kg_{dw}/kg_{dw}. 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 (antimonial lead with arsenic) is sparingly soluble in water and with its relatively high K_d value, is expected to be absorbed onto soils and sediments. Typical log K_d-values of 5.2, 5.7 and 3.8 have been determined for freshwater sediment, marine sediment and soil, respectively.

According to EC-Regulation 1907/2006 (REACH) as amended by Commission Regulation (EU) 2015/830

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 metal (antimonial lead with arsenic). 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. The PBT and vPvB criteria of Annex XIII to the Regulation do not apply to inorganic substances, such as lead metal (antimonial lead with arsenic).

12.6. Endocrine disrupting properties

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12.7. Other adverse effects

Lead metal (antimonial lead with arsenic) 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

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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
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*

According to EC-Regulation 1907/2006 (REACH) as amended by Commission Regulation (EU) 2015/830

14.5. Environmental hazards

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14.6. Special precautions for user

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14.7. Maritime transport in bulk according to IMO instruments

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(*) 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

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

No

SECTION 16: Other information

Classification method

Classification is based on the CLP mixture classification rules.

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

H350: May cause cancer.
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.
H301 - Toxic if swallowed.
H331 - Toxic if inhaled.
H373 - May cause damage to organs through prolonged or repeated exposure.
H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.
H412 - Harmful to aquatic life with long lasting effects.
H413 - May cause long lasting harmful effects to aquatic life.

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.

According to EC-Regulation 1907/2006 (REACH) as amended by Commission Regulation (EU) 2015/830

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 információs szolgáltatás mérgezés: +36 80 201 199; +36 1 476 6464
Iceland: Neyðarlínan: Sími 112. Eitrunarmiðstöð Landspítalans. 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 enquiry 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)

24-11-2022

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

24-11-2022