

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

**Lead, dross, bismuth rich****SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Trade name**

Lead, dross, bismuth rich

**CAS number**

69029-46-5

**EC number**

273-792-0

**REACH registration number**

01-2119535105-49-0004

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

Use as intermediate in metal manufacturing.

**1.3. Details of the supplier of the safety data sheet****Supplier**

Boliden Commercial

Street address

Box 750

10135 Stockholm

Sweden

Telephone

+46 8 610 15 00

Email

info.market@boliden.com

**1.4. Emergency telephone number**

112

**Available outside office hours**

Yes

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## Lead, dross, bismuth rich

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

**Classification**

Reproductive toxicity, hazard category 1A

Reproductive toxicity, Effects on or via lactation, additional hazard category

Specific Target Organ Toxicity — Repeated exposure, hazard category 1

Hazardous to the aquatic environment — Chronic hazard category 2

**Hazard statements**

H360FD, H362, H372, H411

#### 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

**Hazard pictograms**



**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 through prolonged or repeated exposure .

H411 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/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

**More information**

Contains : Lead, dross, bismuth-rich

#### 2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
Lead, dross, bismuth-rich	69029-46-5 273-792-0 01-2119535105-49 -	100%	Repr. 1A, Lact., STOT RE 1, Aquatic Chronic 2	H360FD, H362, H372, H411 - -	-

#### **Product based on**

Lead, dross, bismuth rich is used as an intermediate in metal manufacturing.

Lead, dross, bismuth rich is comprised of the following key mineral species:

Lead [CAS: 7439-92-1/EC: 231-100-4] - 22-95%

Magnesium [CAS: 7439-95-4/EC: 231-104-6] - 0-25%

Bismuth [CAS: 7440-69-9/EC: 231-177-4] - 1-20%

Calcium [CAS: 7440-70-2/EC: 231-179-5] - 0-14%

Antimony compounds [CAS: 7440-36-0/EC: 231-146-5] - 0-5%

Silver [CAS: 7440-22-4/EC: 231-131-3] - 0-1%

Copper [CAS: 7440-50-8/EC: 231-159-6] - 0-0.5%

#### **Substance additional information**

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### **Description of first aid measures**

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

##### **Inhalation**

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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### **Skin contact**

Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes.

Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Wash clothing before reuse. Clean shoes thoroughly before reuse.

### **Eye contact**

Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes.

### **Ingestion**

Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

### **Inhalation**

Adverse symptoms may include the following:

- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

### **Skin contact**

Adverse symptoms may include the following:

- pain or irritation
- redness
- blistering may occur
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

### **Eye contact**

Adverse symptoms may include the following:

- pain
- watering
- redness

### **Ingestion**

Adverse symptoms may include the following:

- stomach pains
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

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

Treat symptomatically. If large quantities of this material are swallowed, call a physician immediately.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media**

The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**

Full water jet

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

This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Decomposition products may include the following materials:

sulfur oxides

metal oxide/oxides

#### 5.3. Advice for firefighters

**Special protective equipment for fire-fighters**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**Measures in case of fire**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

### SECTION 6: Accidental release measures

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

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.

#### 6.2. Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

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

Small spill : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.  
 Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

### 6.4. Reference to other sections

Personal protection equipment: see section 8

Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Preventive handling precautions

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid contact during pregnancy or while nursing. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

#### General hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.  
 Seveso II Directive: This product is controlled under the Seveso II Directive.

### 7.3. Specific end use(s)

Not available

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

National occupational exposure limits

Ingredient	CAS No. EC No.	Exposure limit ppm / mg/m <sup>3</sup>	Source	Remark	Year
Lead, dross, bismuth-rich	69029-46-5 273-792-0	- 0.15	EU Occupational Exposure Limits	BOELV	-
lead massive: [particle diameter ≥ 1 mm]	7439-92-1 231-100-4	- 0.15	EU occupational exposure limit values	BOELV	-
silver	7440-22-4 231-131-3	- 0.1	EU Community Occupational Exposure Limits	IOELV	-

DNEL/DMEL

Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Inhalation	20 ng/m <sup>3</sup>	Consumers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Inhalation	20 ng/m <sup>3</sup>	Consumers	Local
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Dermal	0.44 µg/cm <sup>2</sup>	Workers	Local
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Oral	1 µg/kg bw/day	Consumers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Dermal	0.0021 mg/kg bw/day	Consumers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Inhalation	4 µg/m <sup>3</sup>	Workers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Inhalation	4 µg/m <sup>3</sup>	Workers	Local
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Dermal	0.00414 mg/kg bw/day	Workers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Chronic (long term) Dermal	0.07 mg/cm <sup>2</sup>	Consumers	Local
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Acute (short term) Oral	12 µg/kg bw/day	Consumers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Acute (short term) Inhalation	0.28 mg/m <sup>3</sup>	Consumers	Local
Lead, dross, bismuth-rich	DNEL	Acute (short term)	0.47 mg/m <sup>3</sup>	Workers	Local

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Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
(69029-46-5/273-792-0)		Inhalation			
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Acute (short term) Inhalation	9.6 mg/m <sup>3</sup>	Consumers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Acute (short term) Inhalation	16 mg/m <sup>3</sup>	Workers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Acute (short term) Dermal	273 mg/kg bw/day	Consumers	Systemic
Lead, dross, bismuth-rich (69029-46-5/273-792-0)	DNEL	Acute (short term) Dermal	273 mg/kg bw/day	Workers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Chronic (long term) Dermal	2.5 mg/kg bw/day	Consumers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Chronic (long term) Oral	3.6 mg/kg bw/day	Consumers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Chronic (long term) Inhalation	5 mg/m <sup>3</sup>	Consumers	Local
magnesium (7439-95-4/231-104-6)	DNEL	Acute (short term) Inhalation	5 mg/m <sup>3</sup>	Consumers	Local
magnesium (7439-95-4/231-104-6)	DNEL	Chronic (long term) Inhalation	5 mg/m <sup>3</sup>	Consumers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Acute (short term) Inhalation	5 mg/m <sup>3</sup>	Consumers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Chronic (long term) Dermal	5 mg/kg bw/day	Workers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Chronic (long term) Inhalation	10 mg/m <sup>3</sup>	Workers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Acute (short term) Inhalation	10 mg/m <sup>3</sup>	Workers	Local
magnesium (7439-95-4/231-104-6)	DNEL	Chronic (long term) Inhalation	10 mg/m <sup>3</sup>	Workers	Local
magnesium (7439-95-4/231-104-6)	DNEL	Acute (short term) Inhalation	10 mg/m <sup>3</sup>	Workers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Acute (short term) Dermal	40 mg/kg bw/day	Consumers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Acute (short term) Dermal	80 mg/kg bw/day	Workers	Systemic
magnesium (7439-95-4/231-104-6)	DNEL	Acute (short term) Oral	100 mg/kg bw/day	Consumers	Systemic
Bismuth (7440-69-9/231-177-4)	DNEL	Chronic (long term) Inhalation	13.1 mg/m <sup>3</sup>	Workers	Systemic
Bismuth (7440-69-9/231-177-4)	DNEL	Chronic (long term) Oral	13.3 mg/kg bw/day	Consumers	Systemic
calcium	DNEL	Chronic (long term)	1 mg/m <sup>3</sup>	Workers	Local



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Product/Substance name (CAS No./EC No.)	Type	Exposure	Value	Population	Effects
(7440-70-2/231-179-5)		Inhalation			
calcium (7440-70-2/231-179-5)	DNEL	Acute (short term) Inhalation	4 mg/m <sup>3</sup>	Workers	Local
antimony compounds (7440-36-0/231-146-5)	DNEL	Chronic (long term) Inhalation	0.1 mg/m <sup>3</sup>	Consumers	Local
antimony compounds (7440-36-0/231-146-5)	DNEL	Chronic (long term) Inhalation	0.5 mg/m <sup>3</sup>	Workers	Local
antimony compounds (7440-36-0/231-146-5)	DNEL	Chronic (long term) Oral	140.8 mg/kg bw/day	Consumers	Systemic
antimony compounds (7440-36-0/231-146-5)	DNEL	Chronic (long term) Dermal	140.8 mg/kg bw/day	Consumers	Systemic
antimony compounds (7440-36-0/231-146-5)	DNEL	Chronic (long term) Dermal	234.7 mg/kg bw/day	Workers	Systemic
silver (7440-22-4/231-131-3)	DNEL	Chronic (long term) Inhalation	0.04 mg/m <sup>3</sup>	Consumers	Systemic
silver (7440-22-4/231-131-3)	DNEL	Chronic (long term) Inhalation	0.1 mg/m <sup>3</sup>	Workers	Systemic
silver (7440-22-4/231-131-3)	DNEL	Chronic (long term) Oral	1.2 mg/kg bw/day	Consumers	Systemic
copper (7440-50-8/231-159-6)	DNEL	Acute (short term) Inhalation	1 mg/m <sup>3</sup>	Consumers	Local
copper (7440-50-8/231-159-6)	DNEL	Chronic (long term) Inhalation	1 mg/m <sup>3</sup>	Consumers	Local
copper (7440-50-8/231-159-6)	DNEL	Acute (short term) Inhalation	20 mg/m <sup>3</sup>	Consumers	Systemic
copper (7440-50-8/231-159-6)	DNEL	Acute (short term) Inhalation	20 mg/m <sup>3</sup>	Workers	Systemic
copper (7440-50-8/231-159-6)	DNEL	Chronic (long term) Dermal	137 mg/kg bw/day	Consumers	Systemic
copper (7440-50-8/231-159-6)	DNEL	Chronic (long term) Dermal	137 mg/kg bw/day	Workers	Systemic
copper (7440-50-8/231-159-6)	DNEL	Acute (short term) Dermal	273 mg/kg bw/day	Consumers	Systemic
copper (7440-50-8/231-159-6)	DNEL	Acute (short term) Dermal	273 mg/kg bw/day	Workers	Systemic

PNEC/PEC

Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
lead massive:	PNEC	Freshwater	2.4 µg/l

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Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
[particle diameter ≥ 1 mm] (7439-92-1/231-100-4)			
lead massive: [particle diameter ≥ 1 mm] (7439-92-1/231-100-4)	PNEC	Marine water	3.3 µg/l
lead massive: [particle diameter ≥ 1 mm] (7439-92-1/231-100-4)	PNEC	Sediment (freshwater)	186 mg/kg sediment dw
lead massive: [particle diameter ≥ 1 mm] (7439-92-1/231-100-4)	PNEC	Sediment (marine water)	168 mg/kg sediment dw
lead massive: [particle diameter ≥ 1 mm] (7439-92-1/231-100-4)	PNEC	Sewage Treatment Plant	100 µg/l
lead massive: [particle diameter ≥ 1 mm] (7439-92-1/231-100-4)	PNEC	Oral (Secondary Poisoning)	10.9 mg/kg food
lead massive: [particle diameter ≥ 1 mm] (7439-92-1/231-100-4)	PNEC	Soil	212 mg/kg soil dry weight
antimony compounds (7440-36-0/231-146-5)	PNEC	Freshwater	113 µg/l
antimony compounds (7440-36-0/231-146-5)	PNEC	Marine water	11.3 µg/l
antimony compounds (7440-36-0/231-146-5)	PNEC	Sediment (freshwater)	11.2 mg/kg dwt
antimony compounds (7440-36-0/231-146-5)	PNEC	Sediment (marine water)	2.24 mg/kg dwt
antimony compounds (7440-36-0/231-146-5)	PNEC	Soil	37 mg/kg dwt
antimony compounds (7440-36-0/231-146-5)	PNEC	Sewage Treatment Plant	2550 µg/l
silver (7440-22-4/231-131-3)	PNEC	Freshwater	0.04 µg/l
silver (7440-22-4/231-131-3)	PNEC	Marine water	0.86 µg/l
silver (7440-22-4/231-131-3)	PNEC	Sediment (freshwater)	438.13 mg/kg dwt
silver (7440-22-4/231-131-3)	PNEC	Sediment (marine water)	438.13 mg/kg dwt
silver (7440-22-4/231-131-3)	PNEC	Soil	1.41 mg/kg dwt
silver (7440-22-4/231-131-3)	PNEC	Sewage Treatment Plant	25 µg/l

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Product/Substance name (CAS No./EC No.)	Type	Environmental compartment	Value
copper (7440-50-8/231-159-6)	PNEC	Freshwater	7.8 µg/l
copper (7440-50-8/231-159-6)	PNEC	Marine water	5.2 µg/l
copper (7440-50-8/231-159-6)	PNEC	Sediment (freshwater)	87 mg/kg dwt
copper (7440-50-8/231-159-6)	PNEC	Sediment (marine water)	676 mg/kg dwt
copper (7440-50-8/231-159-6)	PNEC	Soil	65 mg/kg dwt
copper (7440-50-8/231-159-6)	PNEC	Sewage Treatment Plant	230 µg/l
copper (7440-50-8/231-159-6)	PNEC	Soil	88 mg/kg dwt

### 8.2. Exposure controls

#### **Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Only CE-marked personal protection equipment should be used.

#### **Eye / face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

#### **Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): nitrile rubber (Class 6)

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### **Other skin protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

### **Respiratory protection**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Wear a half mask respirator with type P2 filter or better.

### **Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

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

#### **Physical state**

Solid

#### **Colour**

Gray / Light brown

#### **Odour**

odourless

#### **Melting point / freezing point**

> 500 °C

#### **Boiling point or initial boiling point and boiling range**

No data available

#### **Flammability**

No data available

#### **Lower and upper explosion limit**

No data available

#### **Flash point**

No data available

#### **Auto-ignition temperature**

Non-flammable.

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**Decomposition temperature**

No data available

**pH**

No data available

**Kinematic viscosity**

No data available

**Solubility**

Partially soluble in the following materials: cold water and hot water.

**Water solubility**

1 -10 g/l

**Partition coefficient n-octanol/water**

No data available

**Vapour pressure**

negligible

**Density and/or relative density**

No data available

**Relative density**

8 - 11

**Relative vapour density**

No data available

**Particle characteristics**

No data available

**9.2. Other information**

No data available

### SECTION 10: Stability and reactivity

**10.1. Reactivity**

No specific test data related to reactivity available for this product or its ingredients.

**10.2. Chemical stability**

Stable at normal conditions

**10.3. Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4. Conditions to avoid**

No data available

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### 10.5. Incompatible materials

Reactive or incompatible with the following materials:

Strong acids

Strong alkalis

Strong oxidizing materials

Reducing agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

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

#### Acute toxicity

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Test animals
Bismuth 7440-69-9 / 231-177-4	LD50	5 g/kg	oral	Rat
antimony compounds 7440-36-0 / 231-146-5	LD50	100 mg/kg	oral	Rat

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### Serious eye damage/irritation

Based on available data, the classification criteria are not met.

#### Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

May damage fertility. May damage the unborn child.

May cause harm to breast-fed children.

#### STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure.

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## Lead, dross, bismuth rich

Product / Substance name CAS / EC no.	Exposure route	Target organs	Result
lead massive: [particle diameter ≥ 1 mm] 7439-92-1 / 231-100-4	oral , inhalation	blood , central nervous system , kidneys	Specific Target Organ Toxicity — Repeated exposure, hazard category 1

### **Aspiration hazard**

Based on available data, the classification criteria are not met.

### **Toxicity in case of inhalation**

Adverse symptoms may include the following:

- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

### **Toxicity in case of skin contact**

Adverse symptoms may include the following:

- pain or irritation
- redness
- blistering may occur
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

### **Toxicity in case of eye contact**

Adverse symptoms may include the following:

- pain
- watering
- redness

### **Toxicity in case of ingestion**

Adverse symptoms may include the following:

- stomach pains
- reduced fetal weight
- increase in fetal deaths
- skeletal malformations

## 11.2. Information on other hazards

### **Endocrine disrupting properties**

According to the currently available resources, there is no conclusive data on the endocrine-disrupting properties for this product and its constituents.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### **Toxicity**

Toxic to aquatic life with long lasting effects.

*Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)*

## Lead, dross, bismuth rich

### Acute fish toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species
Lead, dross, bismuth-rich 69029-46-5 / 273-792-0	LC50	<1 mg/l	96 h	-	-
antimony compounds 7440-36-0 / 231-146-5	LC50	22 mg/l	96 h	Fresh water	Pimephales promelas (fathead minnow)
silver 7440-22-4 / 231-131-3	LC50	2.13 µg/l	96 h	Fresh water	Pimephales promelas (fathead minnow)
copper 7440-50-8 / 231-159-6	LC50	7.56 µg/l	96 h	Marine water	Periophthalmus waltoni

### Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species
Lead, dross, bismuth-rich 69029-46-5 / 273-792-0	EC50	<1 mg/l	72 h	-	-
lead massive: [particle diameter ≥ 1 mm] 7439-92-1 / 231-100-4	EC50	1340 ppb	72 h	Marine water	Isochrysis galbana
lead massive: [particle diameter ≥ 1 mm] 7439-92-1 / 231-100-4	EC50	8000 µg/l	4 d	Fresh water	Lemna minor
silver 7440-22-4 / 231-131-3	EC50	1.4 µg/l	96 h	Marine water	Chroomonas sp.
copper 7440-50-8 / 231-159-6	EC50	1100 µg/l	96 h	Fresh water	Lemna minor (little duckweed)
copper 7440-50-8 / 231-159-6	IC50	13 µg/l	72 h	Fresh water	Pseudokirchneriella subcapitata



*Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)*

## Lead, dross, bismuth rich

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species
copper 7440-50-8 / 231-159-6	IC50	5.4 mg/l	72 h	Marine water	Plantae

### Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species
Lead, dross, bismuth-rich 69029-46-5 / 273-792-0	EC50	<1 mg/l	48 h	-	-
antimony compounds 7440-36-0 / 231-146-5	LC50	18000 µg/l	48 h	Fresh water	Daphnia magna (Big water flea)
silver 7440-22-4 / 231-131-3	EC50	0.24 µg/l	48 h	Fresh water	Daphnia magna (Big water flea)
silver 7440-22-4 / 231-131-3	LC50	11 µg/l	48 h	Fresh water	Ceriodaphnia reticulata
copper 7440-50-8 / 231-159-6	EC50	2.1 µg/l	48 h	Fresh water	Daphnia longispina
copper 7440-50-8 / 231-159-6	LC50	0.072 µg/l	48 h	Marine water	Amphipoda

### Chronical toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species
lead massive: [particle diameter ≥ 1 mm] 7439-92-1 / 231-100-4	NOEC	1.09 mg/l	4 d	Fresh water	Scenedesmus acutus var. acutus
calcium 7440-70-2 / 231-179-5	NOEC	90 mg/l	30 d	Fresh water	Oreochromis niloticus
silver	NOEC	5 mg/l	72 h	Marine water	Glenodinium halli

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

## Lead, dross, bismuth rich

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Endpoint of the test	Species
7440-22-4 / 231-131-3					
copper 7440-50-8 / 231-159-6	NOEC	2.5 µg/l	72 h	Marine water	Nitzschia closterium
copper 7440-50-8 / 231-159-6	NOEC	7 mg/l	72 h	Fresh water	Ceratophyllum demersum
copper 7440-50-8 / 231-159-6	NOEC	0.02 mg/l	21 d	Fresh water	Cambarus bartonii
copper 7440-50-8 / 231-159-6	NOEC	2 µg/l	21 d	Fresh water	Daphnia magna (Big water flea)
copper 7440-50-8 / 231-159-6	NOEC	0.8 µg/l	42 d	Fresh water	Oreochromis niloticus

### 12.2. Persistence and degradability

#### Persistence and degradability

Lead, dross contains inorganic substances that do not degrade. The fate and distribution of the separate metals present are likely to be the same as for the elements. Biodegradation is not relevant for inorganic substances.

### 12.3. Bioaccumulative potential

#### Bioaccumulative potential

Product / Substance name CAS / EC no.	Bioconcentration factor (BCF)	Result
magnesium 7439-95-4 / 231-104-6	295908	Bioaccumulative potential - high

### 12.4. Mobility in soil

#### Mobility

Lead dross, bismuth rich, contains inorganic lead and lead compounds which are sparingly soluble and are expected to be adsorbed onto soils and sediments. Mobility is expected to be low.

### 12.5. Results of PBT and vPvB assessment

#### Results of PBT and vPvB assessment

The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6. Endocrine disrupting properties

According to the currently available resources, there is no conclusive data on the endocrine-disrupting properties for this product and its constituents.

*Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)*

## Lead, dross, bismuth rich

### 12.7. Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

#### Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Waste code	Waste description
06 04 05*	wastes containing other heavy metals
10 04 05*	other particulates and dust

Please note - an asterisk (\*) next to a code denotes that it is HAZARDOUS WASTE.

### Other

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

EU waste hazard properties:

HP 5 - Specific Target Organ Toxicity (STOT) / Aspiration toxicity

HP 10 - Toxic for reproduction

HP 14 - Ecotoxic

## SECTION 14: Transport information

### 14.1. UN number

3077

### 14.2. UN proper shipping name

#### ADR / RID / ADN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead, dross, bismuth-rich)

#### IMDG proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (LEAD, DROSS, BISMUTH RICH)

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

## Lead, dross, bismuth rich

**IATA proper shipping name**

Environmentally hazardous substance, solid, n.o.s. (LEAD, DROSS, BISMUTH RICH)

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

**Label**

ADR/RID/ADN



9 Environmental hazard

IMDG



9 Environmental hazard

IATA



9 Environmental hazard

**ADR / RID Class**

9

**ADR / RID Classification code**

M7

**ADR / RID hazard identification number**

90

**IMDG Class**

9

**IATA Class**

9

**ADN Class**

9

**ADN Class Code**

M7

**14.4. Packing group**

ADR / RID / ADN: III

IMDG: III

IATA: III

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## Lead, dross, bismuth rich

### 14.5. Environmental hazards

**Environmental hazards**

ADR/RID/ADN: Hazardous for the environment

**IMDG Marine Pollutant**

Yes.

### 14.6. Special precautions for user

**Special precautions for user**

Tunnel restriction code: -

Transport category: 3

**IMDG EmS**

F-A, S-F

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

Not applicable

**Other**

Not applicable

## SECTION 15: Regulatory information

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

**EU regulations**

EU Regulation (EC) No. 1907/2006 (REACH)

CLP - Regulation (EC) No 1272/2008

Contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: Lead - Toxic to reproduction ( Article 59 (REACH-regulation) candidate list )

Regulation (EU) 649/2012 (PIC) : Annex I - Part 1 - Lead compounds- Listed

Regulation (EC) 2019/1021 [POP Regulation] : Heavy metals - Annex 1 - Lead (Pb) - Listed

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]

**National regulations**

No data available

### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

## SECTION 16: Other information

**Changes to previous revision**

Changes were made to the following sections: 1-16

Version number:	2.0
Issued:	2023-09-07

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

## Lead, dross, bismuth rich

### **Phrase meaning**

Repr. 1A - Reproductive toxicity, hazard category 1A

Lact. - Reproductive toxicity, Effects on or via lactation, additional hazard category

STOT RE 1 - Specific Target Organ Toxicity — Repeated exposure, hazard category 1

Aquatic Chronic 2 - Hazardous to the aquatic environment — Chronic hazard category 2

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 .

H372 Causes damage to organs through prolonged or repeated exposure .?.

H411 Toxic to aquatic life with long lasting effects.

### **Manufacturer's notes**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.