

# SAFETY DATA SHEET

Lead, dross, antimony rich

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

### 1.1 Product identifier

**Product name** : Lead, dross, antimony rich**EC number** : 273-791-5**REACH Registration number**

Registration number	Legal entity
01-2119510714-47	-

**CAS number** : 69029-45-4**Product code** : Not available.**Product description** : Not available.**Product type** : Solid.**Other means of identification** : Lead, dross, antimony rich; Antimony dross; Antimony slag from softening furnace; Lead refinery softener slag; Lead dross antimony rich

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

Identified uses
For use only as intermediate

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

Boliden Commercial  
Box 750  
SE-101 35 Stockholm  
Sweden  
Tel +46 8 610 15 00**e-mail address of person responsible for this SDS** : info.market@boliden.com

### 1.4 Emergency telephone number

**National advisory body/Poison Center****Telephone number** : 112

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : UVCB**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Acute Tox. 3, H301

Acute Tox. 4, H332

Skin Irrit. 2, H315

Eye Dam. 1, H318

Carc. 1A, H350

Repr. 1A, H360FD

STOT RE 1, H372 (blood, central nervous system (CNS), kidneys)

Aquatic Acute 1, H400 (M=1)

Aquatic Chronic 1, H410 (M=1)

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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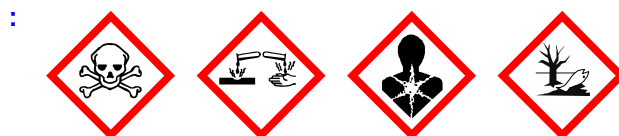
## SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

: Toxic if swallowed.  
Causes skin irritation.  
Causes serious eye damage.  
Harmful if inhaled.  
May cause cancer.  
May damage fertility. May damage the unborn child.  
Causes damage to organs through prolonged or repeated exposure. (blood, central nervous system (CNS), kidneys)  
Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

##### Prevention

: Obtain special instructions before use. Wear protective gloves: > 8 hours (breakthrough time): nitrile rubber (Class 6). Wear protective clothing. Wear eye or face protection. Avoid release to the environment. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

##### Response

: Collect spillage. IF exposed or concerned: Get medical advice or attention. IF INHALED: Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

##### Storage

: Store locked up.

##### Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

#### Hazardous ingredients

: Lead, dross, antimony-rich

#### Supplemental label elements

: Not applicable.

#### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Restricted to professional users.  
People under the age of 18 must not be exposed to this product cf. Council Directive 94/33/EC. Only for industrial use. Pregnant and nursing women must not be exposed to the effects of this product. The risk, and possible technical precautions or design of the workplace to avoid such risk, must therefore be evaluated.

#### Special packaging requirements

##### Containers to be fitted with child-resistant fastenings

: Not applicable.

##### Tactile warning of danger

: Not applicable.

### 2.3 Other hazards

#### Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

PBT	P	B	T	vPvB	vP	vB
Not applicable. (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

#### Other hazards which do not result in classification

: May form poisonous antimony hydride (SbH<sub>3</sub>) in contact with acids.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances : UVCB

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Lead, dross, antimony-rich	REACH #: 01-2119510714-47 EC: 273-791-5 CAS: 69029-45-4	100	Acute Tox. 3, H301 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 1A, H350 Repr. 1A, H360FD STOT RE 1, H372 (blood, central nervous system (CNS), kidneys) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[*]
lead compounds	EC: 215-267-0 CAS: 1317-36-8 Index: 082-001-00-6	60	Acute Tox. 4, H302 Acute Tox. 4, H332 Carc. 2, H351 Repr. 1A, H360Df Lact., H362 STOT RE 1, H372 (blood, central nervous system (CNS), kidneys) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[A]
antimony trioxide	EC: 215-175-0 CAS: 1309-64-4 Index: 051-005-00-X	30	Carc. 2, H351	[A]
diarsenic trioxide	EC: 215-481-4 CAS: 1327-53-3 Index: 033-003-00-0	2	Acute Tox. 2, H300 Skin Corr. 1B, H314 Eye Dam. 1, H318 Carc. 1A, H350 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[A]
zinc oxide	EC: 215-222-5 CAS: 1314-13-2 Index: 030-013-00-7	<0.4	Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)	[A]
copper(II) oxide	EC: 215-269-1 CAS: 1317-38-0 Index: 029-016-00-6	0.14	Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=1) <b>See Section 16 for the full text of the H statements declared above.</b>	[A]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

#### Type

[\*] Substance

[A] Constituent

[B] Impurity

[C] Stabilizing additive

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- 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. Chemical burns must be treated promptly by a physician.
- 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.
- 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. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- 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. Chemical burns must be treated promptly by a physician. 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.
- Protection of first-aiders** : 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.

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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- 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
- 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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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## SECTION 4: First aid measures

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : Do not use water jet.

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

**Hazards from the substance or mixture** : This material is very 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.

**Hazardous combustion products** : Decomposition products may include the following materials:  
sulfur oxides  
metal oxide/oxides

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : 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.

**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.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** : 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.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 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.

### 6.3 Methods and materials 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

: See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

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## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. 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.
- Advice on general occupational 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 Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1	100 tonne	200 tonne

### 7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
Lead, dross, antimony-rich	<b>EU OEL (Europe, 10/2019). Notes: list of binding occupational exposure limit values</b> TWA: 0.15 mg/m <sup>3</sup> 8 hours.
lead compounds	<b>EU OEL (Europe, 10/2019). Notes: list of binding occupational exposure limit values</b> TWA: 0.15 mg/m <sup>3</sup> 8 hours.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures

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## SECTION 8: Exposure controls/personal protection

for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Lead, dross, antimony-rich	DNEL	Long term Inhalation	20 ng/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	20 ng/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	0.00044 mg/cm <sup>2</sup>	Workers	Local
	DNEL	Long term Oral	1 µg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.0021 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	4 µg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	4 µg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	0.00414 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Oral	0.012 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.07 mg/cm <sup>2</sup>	General population	Local
	DNEL	Short term Inhalation	0.28 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	0.47 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	9.6 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	16 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Dermal	273 mg/kg bw/day	General population	Systemic
DNEL	Short term Dermal	273 mg/kg bw/day	Workers	Systemic	
antimony trioxide	DNEL	Long term Inhalation	0.0051 mg/m <sup>3</sup>	General population	Local
	DNEL	Long term Inhalation	0.0051 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	0.021 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	0.021 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Oral	1.125 mg/kg bw/day	General population	Systemic
diarsenic trioxide	DNEL	Long term Dermal	1.125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2.25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	2.2 µg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2.5 µg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	5 µg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	112 µg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	112 µg/kg bw/day	Workers	Systemic

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## SECTION 8: Exposure controls/personal protection

zinc oxide	DNEL	Long term Inhalation	0.5 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Oral	0.83 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2.5 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic

### PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
lead compounds	Fresh water	3.1 µg/l	-
	Marine water	3.5 µg/l	-
	Fresh water sediment	174 mg/kg dwt	-
	Fresh water sediment	41 mg/kg dwt	-
	Marine water sediment	164 mg/kg dwt	-
	Soil	212 mg/kg dwt	-
	Sewage Treatment Plant	0.1 mg/l	-

## 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.

### Individual protection measures

**Hygiene measures** : 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.

### Skin protection

**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)

**Body 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.

**Other skin protection** : 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.



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## SECTION 8: Exposure controls/personal protection

- 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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Solid.
- Color** : Yellow. / Gray. (Light/Metallic.)
- Odor** : Odorless.
- Odor threshold** : Not available.
- Melting point/freezing point** : 316°C
- Initial boiling point and boiling range** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Not applicable.
- Flash point** : Not applicable.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- pH** : 7.6 to 10.8
- Viscosity** : Not applicable.
- Solubility(ies)** : Very slightly soluble in the following materials: cold water and hot water.
- Solubility in water** : 0.0001 to 0.1 g/l
- Miscible with water** : Yes.
- Partition coefficient: n-octanol/ water** : Not applicable.
- Vapor pressure** : Not applicable.
- Evaporation rate** : Not available.
- Relative density** : 8
- Vapor density** : Not applicable.
- Explosive properties** : Not applicable.
- Oxidizing properties** : Not applicable.
- Particle characteristics**
- Median particle size** : Not 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** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Contact with acids liberates toxic gas. Contact with water liberates toxic gas.

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## SECTION 10: Stability and reactivity

**10.4 Conditions to avoid** : Keep away from heat. Protect from moisture. Keep container dry.

**10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
 strong acids  
 strong alkalis  
 Strong oxidizing materials  
 Reducing agent.

**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 toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
diarsenic trioxide	LD50 Oral	Rat	10 mg/kg	-
zinc oxide	LD50 Oral	Rat	>5000 mg/kg	-

**Conclusion/Summary** : Toxic if swallowed. Harmful if inhaled.

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Lead, dross, antimony-rich	100	N/A	N/A	11	N/A
lead compounds	500	N/A	N/A	N/A	1.5
diarsenic trioxide	10	N/A	N/A	N/A	N/A

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
lead compounds	Skin - Mild irritant	Rabbit	-	24 hours 100 mg	-

#### Conclusion/Summary

**Skin** : Causes skin irritation.  
**Eyes** : Causes serious eye damage.  
**Respiratory** : Non-irritating to the respiratory system.

#### Sensitization

##### Conclusion/Summary

**Skin** : Non-sensitizer to skin.  
**Respiratory** : Not classified for respiratory sensitization.

#### Mutagenicity

**Conclusion/Summary** : Not classified as dangerous

#### Carcinogenicity

**Conclusion/Summary** : May cause cancer.

#### Reproductive toxicity

**Conclusion/Summary** : May damage fertility. May damage the unborn child.

#### Teratogenicity

**Conclusion/Summary** : Not classified as dangerous

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

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## SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
Lead, dross, antimony-rich	Category 1	-	blood, central nervous system (CNS), kidneys
lead compounds	Category 1	-	blood, central nervous system (CNS), kidneys

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Causes skin irritation.
- Ingestion** : Toxic if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- 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
- Ingestion** : Adverse symptoms may include the following:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

**Conclusion/Summary** : Not available.

**General** : Causes damage to organs through prolonged or repeated exposure.

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## SECTION 11: Toxicological information

<b>Carcinogenicity</b>	: May cause cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: May damage the unborn child.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: May damage fertility.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
lead compounds	Acute LC50 132 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 298 µg/l Fresh water	Fish - Pimephales promelas - Neonate	96 hours
antimony trioxide	Acute EC50 560 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 423.45 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 >530 mg/l Fresh water	Fish - Lepomis macrochirus - Young of the year	96 hours
diarsenic trioxide	Acute EC50 34.7 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 2.5 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 3380 µg/l Marine water	Fish - Terapon jarbua - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic EC10 9.4 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Chronic IC10 1.3 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
zinc oxide	Acute EC50 24.6 mg/l	Daphnia	48 hours
	Acute IC50 1.85 mg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute IC50 46 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 98 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
copper(II) oxide	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 131.8 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 >56000 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

**Conclusion/Summary** : Very toxic to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
diarsenic trioxide	-	0.143	low
zinc oxide	-	28960	high

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

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## SECTION 12: Ecological information

### 12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Lead, dross, antimony-rich	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : 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.

**Hazardous waste** : Yes.

#### European waste catalogue (EWC)








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

#### Packaging

**Methods of disposal** : 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.

**Special precautions** : 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.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	UN3288	UN3288	UN3288	UN3288
<b>14.2 UN proper shipping name</b>	TOXIC SOLID, INORGANIC, N.O.S. (Lead dross antimony rich (General Grade))	TOXIC SOLID, INORGANIC, N.O.S. (Lead dross antimony rich (General Grade))	TOXIC SOLID, INORGANIC, N.O.S. (Lead dross antimony rich (General Grade))	Toxic solid, inorganic, n.o.s. (Lead dross antimony rich (General Grade))
<b>14.3 Transport hazard class(es)</b>	6.1  	6.1  	6.1  	6.1 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

#### Additional information

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## SECTION 14: Transport information

- ADR/RID** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Hazard identification number** 60  
**Limited quantity** 5 kg  
**Special provisions** 274  
**Tunnel code** (E)
- ADN** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Special provisions** 274, 802
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**Emergency schedules** F-A, S-A  
**Special provisions** 223, 274
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.  
**Quantity limitation** Passenger and Cargo Aircraft: 100 kg. Packaging instructions: 670. Cargo Aircraft Only: 200 kg. Packaging instructions: 677. Limited Quantities - Passenger Aircraft: 10 kg. Packaging instructions: Y645.  
**Special provisions** A3, A5

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

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

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

##### Annex XIV - List of substances subject to authorization

##### Annex XIV

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Carcinogen	diarsenic trioxide	Listed	8	2/17/2012

##### Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Carcinogen	diarsenic trioxide	Recommended	ED/68/2009	2/17/2012
Toxic to reproduction	lead monoxide; lead oxide	Recommended	ED/49/2014	11/10/2016

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users.  
 People under the age of 18 must not be exposed to this product cf. Council Directive 94/33/EC. Only for industrial use. Pregnant and nursing women must not be exposed to the effects of this product. The risk, and possible technical precautions or design of the workplace to avoid such risk, must therefore be evaluated.

#### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Listed

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## SECTION 15: Regulatory information

### Ozone depleting substances (1005/2009/EU)

Not listed.

### Prior Informed Consent (PIC) (649/2012/EU)

Annex	Ingredient name	Status
Annex I - Part 1	Lead compounds	Listed

### Persistent Organic Pollutants

Not listed.

### Seveso Directive

This product is controlled under the Seveso Directive.

#### Danger criteria

Category
E1

### National regulations

### International regulations

### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

#### Inventory list

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <b>Japan inventory (CSCL)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are active or exempted.
<b>Viet Nam</b>	: All components are listed or exempted.

**15.2 Chemical Safety Assessment** : Complete.

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## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Acute Tox. 3, H301	Expert judgment
Acute Tox. 4, H332	On basis of test data
Skin Irrit. 2, H315	Expert judgment
Eye Dam. 1, H318	Expert judgment
Carc. 1A, H350	Expert judgment
Repr. 1A, H360FD	Expert judgment
STOT RE 1, H372 (blood, central nervous system (CNS), kidneys)	Expert judgment
Aquatic Acute 1, H400 (M=1)	Expert judgment
Aquatic Chronic 1, H410 (M=1)	Expert judgment

### Full text of abbreviated H statements

H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360Df	May damage the unborn child. Suspected of damaging fertility.
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.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

### Full text of classifications [CLP/GHS]

Acute Tox. 2	ACUTE TOXICITY - Category 2
Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Carc. 1A	CARCINOGENICITY - Category 1A
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Lact.	TOXIC TO REPRODUCTION - Effects on or via lactation
Repr. 1A	TOXIC TO REPRODUCTION - Category 1A
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

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*Lead, dross, antimony rich*

## SECTION 16: Other information

**Date of previous issue** : 10/1/2021

**Version** : 1.01

### Notice to reader

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.