

# SAFETY DATA SHEET

Alloy Sn62-Pb36-Ag2 M8



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

### 1.1 Product identifier

**Product name** : Alloy Sn62-Pb36-Ag2 M8  
**Reference number** : GHS050  
**Product type** : Solid. [Solder Paste]  
**Other means of identification** : Not available.

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

Not applicable.

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

AIM  
9100 Henri Bourassa East  
Montreal, QC  
H1E 2S4  
(514) 494-2000

AIM Solder Europe Sp. z.o.o.  
ul. Papiernicza 7  
Łódź 92-312  
Poland

**e-mail address of person responsible for this SDS** : Safetydata@aimsolder.com

### 1.4 Emergency telephone number

#### National advisory body/Poison Center

**Telephone number** : INFOTRAC  
Europe: 0800-181-29-24  
International: (352) 323-3500

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Repr. 1B, H360FD (Fertility and Unborn child)

Lact., H362

STOT RE 2, H373

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

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

**Ingredients of unknown ecotoxicity** : Contains 3.5 % of components with unknown hazards to the aquatic environment

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

## SECTION 2: Hazards identification

### Hazard pictograms



### Signal word

: Danger

### Hazard statements

: May damage fertility or the unborn child.  
May cause harm to breast-fed children.  
May cause damage to organs through prolonged or repeated exposure.  
Very toxic to aquatic life with long lasting effects.

### Precautionary statements

#### General

: Not applicable.

#### Prevention

: Obtain special instructions before use. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment. Do not breathe dust. Avoid contact during pregnancy or while nursing.

#### Response

: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention.

#### Storage

: Store locked up.

#### Disposal

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

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

: Restricted to professional users. For the supply to the general public - Entry No. 30, Entry No. 63.

### Special packaging requirements

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

: Not applicable.

#### Tactile warning of danger

: Not applicable.

### 2.3 Other hazards

P: Not available. B: Not available. T: Not available.

vP: Not available. vB: Not available.

### Other hazards which do not result in classification

: None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

: Mixture

| Product/ingredient name | Identifiers                     | %         | Regulation (EC) No. 1272/2008 [CLP]                                | Type    |
|-------------------------|---------------------------------|-----------|--|---------|
| tin                     | EC: 231-141-8<br>CAS: 7440-31-5 | ≥1 - <95  | Not classified.  | [2]     |
| lead                    | EC: 231-100-4<br>CAS: 7439-92-1 | ≥1 - <95  | Aquatic Acute 1, H400 (M=1)<br>Aquatic Chronic 1, H410 (M=1000)    | [1] [2] |
| silver                  | EC: 231-131-3<br>CAS: 7440-22-4 | ≥1 - <95  | Aquatic Acute 1, H400 (M=1000)<br>Aquatic Chronic 1, H410 (M=1000) | [1] [2] |
| tributylamine           | EC: 203-058-7<br>CAS: 102-82-9  | ≥0.3 - <1 | Acute Tox. 3, H301<br>Aquatic Chronic 2, H411                      | [1]     |
| maleic acid             | EC: 203-742-5                   | ≥0.3 - <1 | Acute Tox. 4, H302   | [1]     |

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### SECTION 3: Composition/information on ingredients

|                    |   |              |   |     |
|--------------------|---|--------------|---|-----|
| amines, coco alkyl | CAS: 110-16-7<br>Index: 607-095-00-3<br><br>EC: 262-977-1<br>CAS: 61788-46-3<br>Index: 612-285-00-4 | ≥0.01 - <0.1 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>STOT SE 3, H335<br>Aquatic Chronic 2, H411<br>Acute Tox. 4, H302<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>STOT SE 3, H335<br>STOT RE 2, H373<br>(gastrointestinal tract, immune system and liver)<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400 (M=10)<br>Aquatic Chronic 1, H410 (M=10)<br><br><b>See Section 16 for the full text of the H statements declared above.</b> | [1] |
|--------------------|---|--------------|---|-----|

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

#### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- Eye contact** : 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. Get medical attention following exposure or if feeling unwell.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention. 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** : 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. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. Get medical attention. 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.

## SECTION 4: First aid measures

**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** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
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.
- 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** : None known.

### 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:  
carbon dioxide  
carbon monoxide  
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. 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.

## 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 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. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

#### Seveso Directive - Reporting thresholds (in tonnes)

##### Danger criteria

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## SECTION 7: Handling and storage

| Category  | Notification and MAPP threshold | Safety report threshold |
|---|---------------------------------|-------------------------|
| E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1 | 100                             | 200                     |

### 7.3 Specific end use(s)

**Recommendations** : Not available.

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

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

| Product/ingredient name | Exposure limit values   |
|-------------------------|---|
| Tin                     | <b>Rozporządzenie Ministra Pracy i Polityki Społecznej (Dz.U. 2014 poz. 817) (Poland, 6/2014).</b><br>TWA: 2 mg/m <sup>3</sup> , (calculated as Sn) 8 hours. Form: Inhalable fraction |
| Lead                    | <b>Rozporządzenie Ministra Pracy i Polityki Społecznej (Dz.U. 2014 poz. 817) (Poland, 6/2014).</b><br>TWA: 0.05 mg/m <sup>3</sup> , (calculated as Pb) 8 hours.                       |
| silver                  | <b>Rozporządzenie Ministra Pracy i Polityki Społecznej (Dz.U. 2014 poz. 817) (Poland, 6/2014).</b><br>TWA: 0.05 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction                   |

**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 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

No DNELs/DMELs available.

#### PNECs

No PNECs available.

### 8.2 Exposure controls

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, 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

## SECTION 8: Exposure controls/personal protection

- 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.
- 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: safety glasses with side-shields.
- 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.
- 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.
- 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.
- 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

#### Appearance

- Physical state** : Solid. [Solder Paste]
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility(ies)** : Not available.

## SECTION 9: Physical and chemical properties

- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Explosive properties** : Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.
- Oxidizing properties** : Not available.

### 9.2 Other information

- Solubility in water** : Not available.
- Molecular weight** : Not applicable.
- Type of aerosol** : Not applicable.
- Ignition distance** : Not applicable.
- Enclosed space ignition - Time equivalent** : Not applicable.
- Enclosed space ignition - Deflagration density** : Not applicable.
- Flame height** : Not applicable.
- Flame duration** : Not applicable.

No additional information.

## 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** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : No specific data.
- 10.5 Incompatible materials** : No specific data.
- 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 |
|----------------------------|-------------|---------|-------------|----------|
| 2,2',2''-nitrioltriethanol | LD50 Dermal | Rabbit  | >2000 mg/kg | -        |
|                            | LD50 Oral   | Rat     | 4190 mg/kg  | -        |

**Conclusion/Summary** : Not available.

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion



## SECTION 11: Toxicological information

| Product/ingredient name    | Result                 | Species | Score | Exposure                            | Observation |
|----------------------------|------------------------|---------|-------|-------------------------------------|-------------|
| 2,2',2''-nitritotriethanol | Eyes - Mild irritant   | Rabbit  | -     | 10 milligrams                       | -           |
|                            | Eyes - Severe irritant | Rabbit  | -     | 20 milligrams                       | -           |
|                            | Skin - Mild irritant   | Human   | -     | 72 hours 15 milligrams Intermittent | -           |
|                            | Skin - Severe irritant | Mouse   | -     | 50 Percent                          | -           |
|                            | Skin - Mild irritant   | Rabbit  | -     | 24 hours 560 milligrams             | -           |
|                            |                        |         |       |                                     |             |

**Conclusion/Summary** : Not available.

### Sensitization

**Conclusion/Summary** : Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

| Product/ingredient name    | Category   | Route of exposure | Target organs     |
|----------------------------|------------|-------------------|-------------------|
| Lead                       | Category 2 | Not determined    | Not determined    |
| 2,2',2''-nitritotriethanol | Category 2 | Not determined    | kidneys and liver |

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

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

**Eye contact** : No specific data.

**Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## SECTION 11: Toxicological information

**Ingestion** : Adverse symptoms may include the following:  
 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** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : May damage the unborn child.

**Developmental effects** : May cause harm to breast-fed children.

**Fertility effects** : May damage fertility.

**Other information** : 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.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Product/ingredient name   | Result                              | Species  | Exposure |
|---------------------------|-------------------------------------|--|----------|
| Lead                      | Acute EC50 105 ppb Marine water     | Algae - Chaetoceros sp. - Exponential growth phase                 | 72 hours |
|                           | Acute EC50 0.489 mg/l Marine water  | Algae - Ulva pertusa   | 96 hours |
|                           | Acute EC50 8000 µg/l Fresh water    | Aquatic plants - Lemna minor                                       | 4 days   |
|                           | Acute LC50 530 µg/l Fresh water     | Crustaceans - Ceriodaphnia reticulata                              | 48 hours |
|                           | Acute LC50 4400 µg/l Fresh water    | Daphnia - Daphnia magna  | 48 hours |
|                           | Acute LC50 0.44 ppm Fresh water     | Fish - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours |
| silver                    | Chronic NOEC 0.25 mg/l Marine water | Algae - Ulva pertusa   | 96 hours |
|                           | Chronic NOEC 0.03 µg/l Fresh water  | Fish - Cyprinus carpio   | 4 weeks  |
|                           | Acute EC50 1.4 µg/l Marine water    | Algae - Chroomonas sp.   | 4 days   |
|                           | Acute EC50 0.24 µg/l Fresh water    | Daphnia - Daphnia magna  | 48 hours |
|                           | Acute LC50 11 µg/l Fresh water      | Crustaceans - Ceriodaphnia reticulata                              | 48 hours |
| 2,2',2"-nitrioltriethanol | Acute LC50 2.13 µg/l Fresh water    | Fish - Pimephales promelas   | 96 hours |
|                           | Chronic NOEC 5 mg/l Marine water    | Algae - Glenodinium halli  | 72 hours |
|                           | EC50 216 mg/l                       | Algae - Desmodesmus  | 72 hours |

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## SECTION 12: Ecological information

|  |                                     |  |          |
|--|-------------------------------------|--|----------|
|  | EC50 169 mg/l                       | subspicatus<br>Algae - Desmodesmus         | 96 hours |
|  | LC50 100 mg/l                       | subspicatus<br>Fish - Pimephales promelas  | 96 hours |
|  | Acute EC50 609.98 mg/l Fresh water  | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
|  | Chronic NOEC 16000 µg/l Fresh water | Daphnia - Daphnia magna                    | 21 days  |

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

### 12.3 Bioaccumulative potential

| Product/ingredient name   | LogP <sub>ow</sub> | BCF  | Potential |
|---------------------------|--------------------|------|-----------|
| silver                    | -                  | 70   | low       |
| 2,2',2"-nitrioltriethanol | -1                 | <3.9 | low       |

### 12.4 Mobility in soil

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

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

**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** : The classification of the product may meet the criteria for a hazardous waste.

#### 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.

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## SECTION 14: Transport information

|                                 | ADR/RID        | ADN            | IMDG           | IATA           |
|---------------------------------|----------------|----------------|----------------|----------------|
| 14.1 UN number                  | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name    | -              | -              | -              | -              |
| 14.3 Transport hazard class(es) | -              | -              | -              | -              |
| 14.4 Packing group              | -              | -              | -              | -              |
| 14.5 Environmental hazards      | No.            | No.            | No.            | No.            |
| Additional information          | -              | -              | -              | -              |

**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 Annex II of MARPOL and the IBC Code** : 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](#)

None of the components are listed.

[Substances of very high concern](#)

| Ingredient name | Intrinsic property    | Status    | GHS reference number | Date of revision |
|-----------------|-----------------------|-----------|----------------------|------------------|
| Lead            | Toxic to reproduction | Candidate | -                    | -                |

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Restricted to professional users. For the supply to the general public - Entry No. 30, Entry No. 63.

[Other EU regulations](#)

**Europe inventory** : Not determined.

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

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## SECTION 15: Regulatory information

**Industrial emissions** : Listed

(integrated pollution prevention and control) -

Water

[Ozone depleting substances \(1005/2009/EU\)](#)

Not listed.

[Prior Informed Consent \(PIC\) \(649/2012/EU\)](#)

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

Not applicable.

[Seveso Directive](#)

This product is controlled under the Seveso Directive.

[Danger criteria](#)

| Category  |
|---|
| E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1 |

**Biocidal products regulation** : Not applicable.

[International regulations](#)

[Chemical Weapon Convention List Schedules I, II & III Chemicals](#)

| Ingredient name | List name    | Status |
|-----------------|--------------|--------|
| Triethanolamine | Schedule III | Listed |

[Montreal Protocol \(Annexes A, B, C, E\)](#)

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](#)

| Ingredient name | List name              | Status |
|-----------------|------------------------|--------|
| Lead (Pb)       | Heavy metals - Annex 1 | Listed |

[International lists](#)

[National inventory](#)

- Australia** : Not determined.  
**Canada** : Not determined.  
**China** : Not determined.  
**Japan** : **Japan inventory (ENCS)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.  
**Malaysia** : Not determined.  
**New Zealand** : Not determined.  
**Philippines** : Not determined.  
**Republic of Korea** : Not determined.  
**Taiwan** : Not determined.  
**Turkey** : Not determined.  
**United States** : All components are listed or exempted.

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## SECTION 15: Regulatory information

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## 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
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

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

| Classification  | Justification  |
|---|--|
| Repr. 1B, H360FD (Fertility and Unborn child)<br>Lact., H362<br>STOT RE 2, H373<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 | Calculation method<br>Calculation method<br>Calculation method<br>Calculation method<br>Calculation method |

### Full text of abbreviated H statements

|  |  |
|--|--|
| H317<br>H360FD<br>H400<br>H410<br>H411 | May cause an allergic skin reaction.<br>May damage fertility. May damage the unborn child.<br>Very toxic to aquatic life.<br>Very toxic to aquatic life with long lasting effects.<br>Toxic to aquatic life with long lasting effects. |
|--|--|

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

|  |   |
|--|---|
| Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>Aquatic Chronic 2, H411<br>Repr. 1, H360FD<br><br>Skin Sens. 1, H317 | AQUATIC HAZARD (ACUTE) - Category 1<br>AQUATIC HAZARD (LONG-TERM) - Category 1<br>AQUATIC HAZARD (LONG-TERM) - Category 2<br>TOXIC TO REPRODUCTION (Fertility and Unborn child) - Category 1<br>SKIN SENSITIZATION - Category 1 |
|--|---|

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### Notice to reader

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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.