

## Safety Data Sheet

**Section 1. Identification**

**Product name** : ALPHA® SILVER BRAZE SOLDER WITH FLUX  
**Product code** : AM53500  
**Product type** : Liquid.  
**Date of issue/Date of revision** : May 15 2015.

| Manufacturer - Supplier                                                                              | Telephone no.:                                          | Fax no.               | Emergency phone:                                                                                                                                 |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| ALPHA<br>Global Headquarters<br>300 Atrium Drive<br>Somerset, New Jersey 08873                       | Toll Free: (800) 367-5460<br>Main Phone: (908) 791-3000 | (908) 791-3090        | UNITED STATES AND CANADA<br>Tel: 800-424-9300<br>INTERNATIONAL, CALL<br>Tel: +1 703-527-3887 (collect calls<br>accepted)<br>Alpha Chemtrec #5591 |
| ALPHA METALS MEXICO SA DE CV<br>Ave Nafta 800, Parque Industrial STIVA<br>Apodaca NL 66600 Mexico    | Tel: +52 81 1156-6602                                   | Fax: +52 81 1156-6655 | Tel: 01 800 022 1400<br>Tel: +52 55 5559-1588                                                                                                    |
| Alent Brasil Soldas Ltda.<br>Rio Jaguarão, 1540 - Vila Buriti<br>Manaus Amazonas 69072-055<br>Brasil | Tel: 55 92 3614-7400                                    | Fax: 55 92 3614-7400  | Tel: 55 92 3614-7423                                                                                                                             |

**Section 2. Hazards identification**

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
**Classification of the substance or mixture** : TOXIC TO REPRODUCTION (Fertility) - Category 1B  
TOXIC TO REPRODUCTION (Unborn child) - Category 1B  
AQUATIC HAZARD (ACUTE) - Category 3  
AQUATIC HAZARD (LONG-TERM) - Category 3

**GHS label elements****Hazard pictograms**

:

**Signal word**

: Danger

**Hazard statements**: May damage fertility or the unborn child.  
Harmful to aquatic life with long lasting effects.**Precautionary statements****General**

: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention**

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.

**Response**

: IF exposed or concerned: Get medical attention.

## Section 2. Hazards identification

- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Do not taste or swallow. Wash thoroughly after handling.
- Hazards not otherwise classified** : Causes digestive tract burns.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

| Ingredient name | %          | CAS number |
|-----------------|------------|------------|
| silver          | 60-70      | 7440-22-4  |
| Inorganic salt  | 1-10       | -          |
| Inorganic acid  | 1-10       | -          |
| red phosphorus  | 0.001-0.01 | 7723-14-0  |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**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 and hence require reporting in this section.**

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

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Get medical attention if irritation occurs.
- 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 15 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.

### Most important symptoms/effects, acute and delayed

#### 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** : Corrosive to the digestive tract. Causes burns.

*Continued on next page*

## Section 4. First aid measures

### 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:  
stomach pains  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that mists 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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful 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 thermal decomposition products** : Decomposition products may include the following materials:  
halogenated compounds  
metal oxide/oxides

- 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.

## Section 6. Accidental release measures

### 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised 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".

- 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.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### 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 breathing vapor or mist. 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.
- 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.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

| Ingredient name | Exposure limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| silver          | <b>ACGIH TLV (United States, 4/2014). Notes: Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.</b><br>TWA: 0.1 mg/m <sup>3</sup> 8 hours. Form: Dust and fumes<br><b>NIOSH REL (United States, 10/2013). Notes: as Ag</b><br>TWA: 0.01 mg/m <sup>3</sup> , (as Ag) 10 hours. Form: METAL DUST AND SOLUBLE<br><b>OSHA PEL (United States, 2/2013). Notes: as Ag</b><br>TWA: 0.01 mg/m <sup>3</sup> , (as Ag) 8 hours. |
| Inorganic salt  | <b>OSHA PEL Z2 (United States, 2/2013).</b><br>TWA: 2.5 mg/m <sup>3</sup> 8 hours. Form: Dust<br><b>ACGIH TLV (United States, 4/2014). Notes: as F</b><br>TWA: 2.5 mg/m <sup>3</sup> , (as F) 8 hours.                                                                                                                                                                                                                                                                                                                                                                         |
| Inorganic acid  | <b>OSHA PEL (United States, 2/2013). Notes: as F</b><br>TWA: 2.5 mg/m <sup>3</sup> , (as F) 8 hours.<br><b>ACGIH TLV (United States, 4/2014). Notes: Refers to Appendix A -- Carcinogens. Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM-TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract. ACGIH 2005 Adoption</b><br>STEL: 6 mg/m <sup>3</sup> 15 minutes. Form: Inhalable fraction<br>TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction                                         |
| red phosphorus  | <b>OSHA PEL (United States, 2/2013).</b><br>TWA: 0.1 mg/m <sup>3</sup> 8 hours.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

#### 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.

#### 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.

### 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.

#### 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.

## Section 8. Exposure controls/personal protection

- 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** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility** : Not available.
- VOC** : 0 g/l
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Incompatibility with various substances** : Reactive or incompatible with the following materials: oxidizing materials, reducing materials, metals, acids, alkalis and moisture.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

## Section 11. Toxicological information

**Routes of entry** : Dermal contact. Inhalation. Ingestion.

### Acute toxicity

| Product/ingredient name                        | Result      | Species    | Dose         | Exposure |
|------------------------------------------------|-------------|------------|--------------|----------|
| silver<br><br>Inorganic salt<br>Inorganic acid | LD Oral     | Guinea pig | >5 g/kg      | -        |
|                                                | LD Oral     | Mouse      | >10 g/kg     | -        |
|                                                | LD50 Oral   | Mouse      | 100 mg/kg    | -        |
|                                                | LD50 Oral   | Rat        | >2000 mg/kg  | -        |
|                                                | LD50 Oral   | Rat        | 245 mg/kg    | -        |
|                                                | LD50 Oral   | Mouse      | 3450 mg/kg   | -        |
|                                                | LD50 Oral   | Rat        | 2500 mg/kg   | -        |
|                                                | LD50 Oral   | Rat        | 2660 mg/kg   | -        |
|                                                | LDLo Dermal | Child      | 1500 mg/kg   | -        |
|                                                | LDLo Dermal | Infant     | 1200 mg/kg   | -        |
|                                                | LDLo Dermal | Man        | 2430 mg/kg   | -        |
|                                                | LDLo Oral   | Human      | 214.28 mg/kg | -        |
|                                                | LDLo Oral   | Rat        | 3000 mg/kg   | -        |
|                                                | LDLo Oral   | Woman      | 200 mg/kg    | -        |
|                                                | LD50 Oral   | Rat        | 3.03 mg/kg   | -        |
| red phosphorus                                 | LD50 Oral   | Rat        | 3.03 mg/kg   | -        |

### Irritation/Corrosion

| Product/ingredient name | Result                  | Species | Score | Exposure                            | Observation |
|-------------------------|-------------------------|---------|-------|-------------------------------------|-------------|
| Inorganic salt          | Skin - Visible necrosis | Rabbit  | -     | >4 hours                            | ≤14 days    |
| Inorganic acid          | Skin - Mild irritant    | Human   | -     | 72 hours 15 milligrams Intermittent | -           |

### Sensitization

Not available.

### Mutagenicity

| Product/ingredient name | Test | Experiment                                       | Result   |
|-------------------------|------|--------------------------------------------------|----------|
| Inorganic acid          | -    | Experiment: In vitro<br>Subject: Mammalian-Human | Positive |

### Carcinogenicity

No applicable toxicity data

### Additional information:

### Classification

| Product/ingredient name | OSHA | IARC | NTP |
|-------------------------|------|------|-----|
| Inorganic salt          | -    | 3    | -   |

### Reproductive toxicity

| Product/ingredient name | Maternal toxicity | Fertility | Development toxin | Species      | Dose             | Exposure |
|-------------------------|-------------------|-----------|-------------------|--------------|------------------|----------|
| Inorganic acid          | Positive          | Positive  | Positive          | Rat - Female | Oral: 1003 mg/kg | -        |
|                         | -                 | -         | Positive          | Rat - Female | Oral: 1600 mg/kg | -        |
|                         | -                 | Positive  | -                 | Rat - Male   | Oral: 45 g/kg    | -        |

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Not available.

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## Section 11. Toxicological information

### Specific target organ toxicity (repeated exposure)

Not available.

### 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** : Corrosive to the digestive tract. Causes burns.

### 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  
**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

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : May damage the unborn child.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : May damage fertility.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

| Route                        | ATE value    |
|------------------------------|--------------|
| Oral                         | 2233.6 mg/kg |
| Dermal                       | 3003 mg/kg   |
| Inhalation (dusts and mists) | 5.005 mg/l   |

## Section 12. Ecological information

### Toxicity

| Product/ingredient name | Result                               | Species                                                                      | Exposure |
|-------------------------|--------------------------------------|------------------------------------------------------------------------------|----------|
| silver                  | Acute EC50 1.4 µg/l Marine water     | Algae - Chroomonas sp.                                                       | 4 days   |
|                         | Acute EC50 0.0092 mg/l               | Daphnia                                                                      | 48 hours |
|                         | Acute EC50 0.24 µg/l Fresh water     | Daphnia - Daphnia magna                                                      | 48 hours |
|                         | Acute LC50 4500 ppb Fresh water      | Crustaceans - Gammarus pseudolimnaeus                                        | 48 hours |
|                         | Acute LC50 0.00213 mg/l              | Fish                                                                         | 96 hours |
|                         | Acute LC50 0.00238 mg/l              | Fish                                                                         | 96 hours |
|                         | Acute LC50 0.00276 mg/l              | Fish                                                                         | 96 hours |
|                         | Acute LC50 0.00312 mg/l              | Fish                                                                         | 96 hours |
|                         | Acute LC50 0.00342 mg/l              | Fish                                                                         | 96 hours |
|                         | Chronic NOEC 5 mg/l Marine water     | Algae - Glenodinium halli                                                    | 72 hours |
| Inorganic acid          | Acute LC50 45.5 mg/l Fresh water     | Crustaceans - Ceriodaphnia dubia                                             | 48 hours |
|                         | Acute LC50 133000 µg/l Fresh water   | Daphnia - Daphnia magna - Neonate                                            | 48 hours |
| red phosphorus          | Acute LC50 75 mg/l Marine water      | Fish - Pagrus major                                                          | 96 hours |
|                         | Chronic NOEC 6000 µg/l Fresh water   | Daphnia - Daphnia magna                                                      | 21 days  |
|                         | Chronic NOEC 2100 µg/l Fresh water   | Fish - Oncorhynchus mykiss                                                   | 87 days  |
|                         | Acute EC50 250 µg/l Fresh water      | Crustaceans - Gammarus fasciatus - Juvenile (Fledgling, Hatchling, Weanling) | 48 hours |
|                         | Acute EC50 30 to 37 µg/l Fresh water | Daphnia - Daphnia magna                                                      | 48 hours |
|                         | Acute LC50 4 µg/l Fresh water        | Fish - Lepomis macrochirus                                                   | 96 hours |

### Persistence and degradability

Not available.

### Bioaccumulative potential

| Product/ingredient name | LogP <sub>ow</sub> | BCF   | Potential |
|-------------------------|--------------------|-------|-----------|
| silver                  | -                  | 70    | low       |
| Inorganic acid          | -1.09              | -     | low       |
| red phosphorus          | -                  | 99000 | high      |

### Mobility in soil

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

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

## Section 13. Disposal considerations

**Disposal methods** : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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.

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## Section 13. Disposal considerations

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

|                            | DOT<br>Classification | TDG<br>Classification | Mexico<br>Classification | UN             | IMDG           | IATA           |
|----------------------------|-----------------------|-----------------------|--------------------------|----------------|----------------|----------------|
| UN number                  | Not regulated.        | Not available.        | Not available.           | Not available. | Not available. | Not available. |
| UN proper shipping name    | -                     | (silver)              | (silver)                 | (silver)       | (silver)       | (silver)       |
| Transport hazard class(es) | -                     | Not available.        | Not available.           | Not available. | Not available. | Not available. |
| Packing group              | -                     | -                     | -                        | -              | -              | -              |
| Environmental hazards      | No.                   | No.                   | No.                      | No.            | No.            | No.            |

**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.

## Section 15. Regulatory information

**U.S. Federal regulations** : TSCA 5(a)2 proposed significant new use rule (SNUR): No products were found.  
TSCA 5(a)2 final significant new use rule (SNUR): No products were found.  
TSCA 12(b) one-time export notification: No products were found.  
TSCA 12(b) annual export notification: No products were found.

**United States inventory (TSCA 8b)** : All components are listed or exempted.

### SARA 302/304

#### Composition/information on ingredients

No products were found.

### SARA 311/312

**Classification** : Immediate (acute) health hazard  
Delayed (chronic) health hazard

### SARA 313

|                                 | Product name | CAS number | %     |
|---------------------------------|--------------|------------|-------|
| Form R - Reporting requirements | silver       | 7440-22-4  | 60-70 |
| Supplier notification           | silver       | 7440-22-4  | 60-70 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### Canada

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## Section 15. Regulatory information

- WHMIS (Canada)** : Class D-1B: Material causing immediate and serious toxic effects (Toxic).  
Class D-2A: Material causing other toxic effects (Very toxic).
- Canada inventory** : All components are listed or exempted.

### International lists

#### National inventory

- Australia** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

|                  |   |
|------------------|---|
| Health           | 2 |
| Flammability     | 0 |
| Physical hazards | 0 |
|                  |   |

### Procedure used to derive the classification

| Classification                | Justification      |
|-------------------------------|--------------------|
| Repr. 1B, H360 (Fertility)    | Calculation method |
| Repr. 1B, H360 (Unborn child) | Calculation method |
| Aquatic Acute 3, H402         | Calculation method |
| Aquatic Chronic 3, H412       | Calculation method |

### History

- Date of issue/Date of revision** : May 15 2015.
- Date of previous issue** : No previous validation.
- Version** : 1
- Prepared by** : **Regulatory Affairs Department**  
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### Key to abbreviations

- : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

☐ Indicates information that has changed from previously issued version.

### Notice to reader

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## Section 16. 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.

4.5b3271

Alpha SDS GHS Americas

