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

**1.1. Product identifier**

<table>
<thead>
<tr>
<th>Substances/Mixture identifier</th>
<th>:</th>
<th>Substance name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form</td>
<td>:</td>
<td>Substance</td>
</tr>
<tr>
<td>Substance name</td>
<td>:</td>
<td>Zinc Gluconate</td>
</tr>
<tr>
<td>EC-No.</td>
<td>:</td>
<td>224-736-9</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>:</td>
<td>4468-02-4</td>
</tr>
<tr>
<td>Formula</td>
<td>:</td>
<td>CsH22ZnO14</td>
</tr>
</tbody>
</table>

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

1.2.1. Relevant identified uses

Use of the substance/mixture: Nutrient; Dietary Supplement

1.2.2. Uses advised against

No additional information available

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

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Distributor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jost Chemical Co.</td>
<td>JOST CHEMICAL EUROPE SPRL</td>
</tr>
<tr>
<td>8150 Lackland Rd.</td>
<td>rue du Bois Portal n° 30/1-3</td>
</tr>
<tr>
<td>63114 Saint Louis, Missouri</td>
<td>B - 5300 Andenne - BELGIQUE</td>
</tr>
<tr>
<td><a href="mailto:sds@jostchemical.com">sds@jostchemical.com</a> - <a href="http://www.jostchemical.com">www.jostchemical.com</a></td>
<td><a href="mailto:info@jostchemical.com">info@jostchemical.com</a></td>
</tr>
</tbody>
</table>

**1.4. Emergency telephone number**

Emergency number: For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

United States and Canada: 1-800-424-9300 / +1 703-527-3887

Global: +1 703-741-5970

**SECTION 2: Hazards identification**

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

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

Hazardous to the aquatic environment — Chronic Hazard, Category 1  
H410

Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

**2.2. Label elements**

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Hazard pictograms (CLP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS09</td>
</tr>
</tbody>
</table>

Signal word (CLP): Warning

Hazard statements (CLP): H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP):
  - P273 - Avoid release to the environment.
  - P391 - Collect spillage.
  - P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards not contributing to the classification: None, to our knowledge.

PBT: not yet assessed

vPvB: not yet assessed

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

<table>
<thead>
<tr>
<th>Substance type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono-constituent</td>
</tr>
</tbody>
</table>
**Zinc Gluconate**
Safety Data Sheet
according to Regulation (EC) No. 453/2010

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc Gluconate</td>
<td>(CAS-No.) 4468-02-4</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 224-736-9</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

### 3.2. Mixtures
Not applicable

**SECTION 4: First aid measures**

#### 4.1. Description of first aid measures
- **First-aid measures after inhalation**: Remove person to fresh air and keep comfortable for breathing.
- **First-aid measures after skin contact**: Wash skin with plenty of water.
- **First-aid measures after eye contact**: Rinse eyes with water as a precaution.
- **First-aid measures after ingestion**: Call a poison center or a doctor if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed
- **Symptoms/effects after inhalation**: Metal fume fever.
- **Symptoms/effects after ingestion**: Diarrhoea. Nausea. Vomiting.

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

**SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media
**Suitable extinguishing media**: Water spray. Dry powder. Foam.

#### 5.2. Special hazards arising from the substance or mixture
- **Fire hazard**: Combustible.
- **Hazardous decomposition products in case of fire**: Toxic fumes may be released.

#### 5.3. Advice for firefighters
- **Firefighting instructions**: Contain the extinguishing fluids by bunding.
- **Protection during firefighting**: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures**

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

##### 6.1.1. For non-emergency personnel
- **Protective equipment**: Gloves. Protective clothing. See "Material-Handling" to select protective clothing.
- **Emergency procedures**: Ventilate spillage area.

##### 6.1.2. For emergency responders
- **Protective equipment**: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions
Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up
- **For containment**: Collect all waste in suitable and labelled containers and dispose according to local legislation.
- **Methods for cleaning up**: Mechanically recover the product.
- **Other information**: Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections
For further information refer to section 13.

**SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling
- **Precautions for safe handling**: Ensure good ventilation of the work station. Wear personal protective equipment.
- **Hygiene measures**: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities
- **Technical measures**: Comply with applicable regulations. Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
- **Storage conditions**: Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.
- **Storage temperature**: Typical warehouse conditions are sufficient to safeguard this product.
- **Packaging materials**: plastics. polyethylene.
7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protective equipment:

Materials for protective clothing:
Wear suitable protective clothing, gloves and eye/face protection

Hand protection:
Impermeable protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Protective clothing

Respiratory protection:
Dust production: dust mask with filter type P1

Personal protective equipment symbol(s):

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder, Granules.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>455.68 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>White, Off-white.</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight, Sweet.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>165 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility</td>
<td>Moderately soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Zinc Gluconate
Safety Data Sheet
according to Regulation (EC) No. 453/2010

Explosive properties: No data available
Oxidising properties: No data available
Explosive limits: Not applicable

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Thermal decomposition generates toxic vapours. Carbon oxides (CO, CO2), Zinc oxide.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral): Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal): Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation): Not classified (Based on available data, the classification criteria are not met)

Zinc Gluconate (4468-02-4)

LD50 oral rat: > 5000 mg/kg
Causes serious eye damage: Not classified (Lack of data)
Serious eye damage/irritation: Not classified (Lack of data)
Respiratory or skin sensitisation: Not classified (Lack of data)
Germ cell mutagenicity: Not classified (Lack of data)
Carcinogenicity: Not classified (Lack of data)
Reproductive toxicity: Not classified (Lack of data)
STOT-single exposure: Not classified (Lack of data)
STOT-repeated exposure: Not classified (Lack of data)
Aspiration hazard: Not classified (Lack of data)

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Toxic to aquatic life.
Dangerous for the environment: Not classified
Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment

Zinc Gluconate (4468-02-4)
PBT: not yet assessed
vPvB: not yet assessed

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste treatment methods: Dispose of contents/container in accordance with licensed collector’s sorting instructions.
SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

| UN-No. (ADR) | 3077 |
| UN-No. (IMDG) | 3077 |
| UN-No. (IATA) | 3077 |
| UN-No. (ADN) | 3077 |
| UN-No. (RID) | 3077 |

14.2. UN proper shipping name

| Proper Shipping Name (ADR) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Proper Shipping Name (IMDG) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Proper Shipping Name (IATA) | Environmentally hazardous substance, solid, n.o.s. |
| Proper Shipping Name (ADN) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Proper Shipping Name (RID) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Transport document description (ADR) | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., III |
| Transport document description (IMDG) | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Gluconate), 9, III, MARINE POLLUTANT |
| Transport document description (IATA) | UN 3077 Environmentally hazardous substance, solid, n.o.s., 9, III |
| Transport document description (ADN) | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., III |
| Transport document description (RID) | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., III |

14.3. Transport hazard class(es)

ADR

| Transport hazard class(es) (ADR) | 9 |
| Danger labels (ADR) | 9 |

IMDG

| Transport hazard class(es) (IMDG) | 9 |
| Danger labels (IMDG) | 9 |

IATA

| Transport hazard class(es) (IATA) | 9 |
| Hazard labels (IATA) | 9 |

ADN

| Transport hazard class(es) (ADN) | 9 |
| Danger labels (ADN) | 9 |
Zinc Gluconate

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RID
Transport hazard class(es) (RID) : 9
Danger labels (RID) : 9

14.4. Packing group
Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

14.5. Environmental hazards
Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user
Overland transport
No data available

Transport by sea
Special provisions (IMDG) : 274, 335, 966, 967
Limited quantities (IMDG) : 5 kg
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P002, LP02
Special packing provisions (IMDG) : PP12
IBC packing instructions (IMDG) : IBC08
IBC special provisions (IMDG) : B3
Tank instructions (IMDG) : T1, BK1, BK2, BK3
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F
Stowage category (IMDG) : A

Air transport
PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y956
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 956
PCA max net quantity (IATA) : 400kg
CAO packing instructions (IATA) : 956
CAO max net quantity (IATA) : 400kg
Special provisions (IATA) : A97, A158, A179, A197
ERG code (IATA) : 9L

Inland waterway transport
No data available

Rail transport
No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
15.1.1. EU-Regulations
No REACH Annex XVII restrictions
Zinc Gluconate is not on the REACH Candidate List
Zinc Gluconate
Safety Data Sheet
according to Regulation (EC) No. 453/2010

Zinc Gluconate is not on the REACH Annex XIV List
Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:
This sheet was updated (refer to the date at the top of this page).

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Aquatic Chronic 1</th>
<th>Hazardous to the aquatic environment — Chronic Hazard, Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.