Copper Gluconate
Safety Data Sheet
According to Regulation (EU) 2015/830 (REACH Annex II)
Date of issue: 11/2/2015   Revision date: 10/2/2019   Supersedes: 6/11/2018   Version: 5.1

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

1.1. Product identifier
Product form : Substance
Substance name: Copper Gluconate
EC-No.: 208-408-2
CAS-No.: 527-09-3
Formula: Cu(C₆H₁₁O₇)₂

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
Manufacturer: Jost Chemical Co.
8150 Lackland Rd.
63114 Saint Louis, Missouri
T 314-428-4300 - F 314-428-4366
sds@jostchemical.com - www.jostchemical.com

Distributor: JOST CHEMICAL EUROPE SPRL
rue du Bois Portal n° 30/1-3
B - 5300 Andenne - BELGIQUE
T +32 85-552655 - F +32 85-552654
info@jostchemical.com

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 — Acute Hazard, Category 1 H400 (M=100)
Full text of H statements: see section 16

Adverse physicochemical, human health and environmental effects
Very toxic to aquatic life.

2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms (CLP):

GHS09

Signal word (CLP): Warning
Hazard statements (CLP): H400 - Very toxic to aquatic life.
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 under normal conditions.
PBT: not yet assessed
vPvB: not yet assessed

SECTION 3: Composition/information on ingredients

3.1. Substances
Substance type: Mono-constituent
**Copper Gluconate**

**Safety Data Sheet**

According to Regulation (EU) 2015/830 (REACH Annex II)

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Gluconate</td>
<td>(CAS-No.) 527-09-3</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 208-408-2</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

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**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:

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

Treat symptomatically.

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**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:
- Reactions involving a fire hazard: see "Reactivity Hazard".

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.

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**SECTION 6: Accidental release measures**

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

**6.1.1. For non-emergency personnel**

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. Knock down/dilute dust cloud with water spray. Collect spillage.

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.

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**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:
- 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.

Incompatible materials:
- Strong oxidisers.

**7.3. Specific end use(s)**

No additional information available
Copper Gluconate
Safety Data Sheet
According to Regulation (EU) 2015/830 (REACH Annex II)

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:
Dust production: dust mask with filter type P2. Gloves. Safety glasses.

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:
Wear suitable protective clothing

Respiratory protection:
Dust production: dust mask with filter type P2

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>Blue-green powder.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>453.85 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Blue. Green.</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic.</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>No data available</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>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>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
**SECTION 10: Stability and reactivity**

**10.1. Reactivity**
Upon combustion: CO and CO2 are formed.

**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**
Thermal decomposition generates: Carbon dioxide. Carbon monoxide.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Causes serious eye damage.</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified (Lack of data)</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified (Lack of data)</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

**12.1. Toxicity**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - general</td>
<td>Dangerous for the environment. Very toxic to aquatic life.</td>
</tr>
<tr>
<td>Dangerous for the environment</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Copper Gluconate (527-09-3)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>0.01 mg/l (Carassius auratus)</td>
</tr>
<tr>
<td>LC50 other aquatic organisms 1</td>
<td>0.55 mg/l (12 h; Shell)</td>
</tr>
</tbody>
</table>

**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**

**Copper Gluconate (527-09-3)**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBT:</td>
<td>not yet assessed</td>
</tr>
<tr>
<td>vPvB:</td>
<td>not yet assessed</td>
</tr>
</tbody>
</table>

**12.6. Other adverse effects**
No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste treatment methods</td>
<td>Dispose of contents/container in accordance with licensed collector’s sorting instructions.</td>
</tr>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>Dispose in a safe manner in accordance with local/national regulations.</td>
</tr>
</tbody>
</table>
## Copper Gluconate

**Safety Data Sheet**

According to Regulation (EU) 2015/830 (REACH Annex II)

### SECTION 14: Transport information

In accordance with ADR / IATA / IMDG

#### 14.1. UN number

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

#### 14.2. UN proper shipping name

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

#### 14.4. Packing group

- Packing group (ADR) : III
- Packing group (IMDG) : III
- Packing group (IATA) : 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**

- Classification code (ADR) : M7
- Special provisions (ADR) : 274, 335, 601, 375
- Limited quantities (ADR) : 5kg
- Excepted quantities (ADR) : E1
- Packing instructions (ADR) : P002, IBC08, LP02, R001
- Mixed packing provisions (ADR) : MP10
- Portable tank and bulk container instructions (ADR) : T1, BK1, BK2
Copper Gluconate
Safety Data Sheet
According to Regulation (EU) 2015/830 (REACH Annex II)

11/2/2015 (Version: 1.0)  EN (English)  6/7
10/2/2019 (Version: 5.1)

Portable tank and bulk container special provisions (ADR)
Tank code (ADR) : SGAV, LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V13
Special provisions for carriage - Bulk (ADR) : VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates : 

Tunnel restriction code (ADR) : E

Transport by sea
Special provisions (IMDG) : 274, 335, 966, 967, 969
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
Stowage and handling (IMDG) : SW23

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

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
Copper Gluconate is not on the REACH Candidate List
Copper 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).

<table>
<thead>
<tr>
<th>Full text of H- and EUH-statements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment — Acute Hazard, Category 1</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II)

*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.*