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

**1.1. Product identifier**

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td>Calcium Citrate Tetrahydrate</td>
</tr>
<tr>
<td>EC-No.</td>
<td>212-391-7</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>5785-44-4</td>
</tr>
<tr>
<td>Formula</td>
<td>Ca(_3)(C(_6)H(_5)O(_7))(_2) (\cdot) 4H(_2)O</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

Pharmaceuticals

**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>Jost Chemical Co.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>8150 Lackland Rd. 63114 Saint Louis, Missouri</td>
</tr>
<tr>
<td>Telephone</td>
<td>T 314-428-4300 - F 314-428-4366</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:sds@jostchemical.com">sds@jostchemical.com</a> - <a href="http://www.jostchemical.com">www.jostchemical.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distributor</th>
<th>JOST CHEMICAL EUROPE SPRL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>rue du Bois Portal n° 30/1-3 B - 5300 Andenne - BELGIQUE</td>
</tr>
<tr>
<td>Telephone</td>
<td>T +32 85-552655 - F +32 85-552654</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:info@jostchemical.com">info@jostchemical.com</a></td>
</tr>
</tbody>
</table>

**1.4. Emergency telephone number**

<table>
<thead>
<tr>
<th>Emergency number</th>
<th>For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States and Canada:</td>
<td>1-800-424-9300 / +1 703-527-3887</td>
</tr>
<tr>
<td>Global:</td>
<td>+1 703-741-5970</td>
</tr>
</tbody>
</table>

**SECTION 2: Hazards identification**

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


Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

**2.2. Label elements**

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

No labelling applicable

**2.3. Other hazards**

PBT: not yet assessed

vPvB: not yet assessed

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

**3.1. Substances**

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Mono-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Calcium Citrate Tetrahydrate</td>
</tr>
<tr>
<td>(CAS-No.)</td>
<td>5785-44-4</td>
</tr>
<tr>
<td>(EC-No.)</td>
<td>212-391-7</td>
</tr>
<tr>
<td>%</td>
<td>100</td>
</tr>
</tbody>
</table>

**3.2. Mixtures**

Not applicable

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

First-aid measures general:

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Wash skin with plenty of water.

First-aid measures after eye contact: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.

First-aid measures after ingestion: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. 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: AFTER INHALATION OF DUST: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Symptom effects after eye contact: Slight irritation. Chronic symptoms: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Respiratory difficulties.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

Fire hazard: DIRECT FIRE HAZARD: Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard.

Explosion hazard: DIRECT EXPLOSION HAZARD: No direct explosion hazard.

Hazardous decomposition products in case of fire: Upon combustion: CO and CO2 are formed.

5.3. Advice for firefighters

Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions: No specific fire-fighting instructions required.


SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Wear personal protective equipment.

6.1.1. For non-emergency personnel


Emergency procedures: Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.

Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

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: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.

Methods for cleaning up: Mechanically recover the product. Stop dust cloud by humidifying. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

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.
Calcium Citrate Tetrahydrate
Safety Data Sheet
According to Regulation (EU) 2015/830 (REACH Annex II)

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. Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing.

Hygiene measures: Observe normal hygiene standards. Keep container tightly closed. 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
Storage conditions: Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.

Heat and ignition sources: KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids.

Storage area: Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements.

Special rules on packaging: SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials: SUITABLE MATERIAL: synthetic material.

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:
Dust production: dust mask with filter type P1. Gloves. Safety glasses. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Materials for protective clothing:
GIVE GOOD RESISTANCE: synthetic material. rubber

Hand protection:
Gloves

Eye protection:
Safety glasses. In case of dust production: protective goggles. 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
Physical state: Solid
Appearance: Fine, white powder, White granules.
Molecular mass: 570.5 g/mol
Colour: White.
Odour: Characteristic odour.
Odour threshold: No data available
Calcium Citrate Tetrahydrate
Safety Data Sheet
According to Regulation (EU) 2015/830 (REACH Annex II)

pH : 5 - 6 (5 %)
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : Not applicable
Boiling point : No data available
Flash point : > 93 °C
Auto-ignition temperature : Not applicable
Decomposition temperature : 100 - 120 °C
Flammability (solid, gas) : Non flammable.
Vapour pressure : No data available
Relative vapour density at 20 °C : Not applicable
Relative density : Not applicable
Solubility : Insoluble in water. Soluble in hydrogenchloride.
Water: 0.085 g/100ml
Ethanol: 0.0065 g/100ml
Log Pow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : Not applicable

9.2. Other information
VOC content : 0 %
Other properties : Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

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
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 (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)

Calcium Citrate Tetrahydrate (5785-44-4)
LD50 oral rat > 2000 mg/kg Anhydrous Product
LD50 dermal rat > 2000 mg/kg Anhydrous Product

Causes serious eye damage. : Not classified (Based on available data, the classification criteria are not met)

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)
**Calcium Citrate Tetrahydrate**

**Safety Data Sheet**

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**Aspiration hazard**
- Not classified (Lack of data)

**Potential adverse human health effects and symptoms**
- Slightly harmful if swallowed. Slightly irritant to respiratory organs. Slightly irritant to eyes.

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### SECTION 12: Ecological information

#### 12.1. Toxicity
- **Ecology - general**
  - Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
- **Ecology - air**
  - Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
- **Ecology - water**
  - No water pollutant (surface water). Insufficient data available on ecotoxicity, pH shift.
- **Dangerous for the environment**
  - Not classified
- **Chronic aquatic toxicity**
  - Not classified

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#### 12.2. Persistence and degradability

**Calcium Citrate Tetrahydrate (5785-44-4)**
- **Persistence and degradability**
  - Biodegradability in water: no data available.

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#### 12.3. Bioaccumulative potential

**Calcium Citrate Tetrahydrate (5785-44-4)**
- **Bioaccumulative potential**
  - No bioaccumulation data available.

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#### 12.4. Mobility in soil

- No additional information available

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#### 12.5. Results of PBT and vPvB assessment

**Calcium Citrate Tetrahydrate (5785-44-4)**
- **PBT**: not yet assessed
- **vPvB**: not yet assessed

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#### 12.6. Other adverse effects

- No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods
- **Regional legislation (waste)**
  - LWCA (the Netherlands): KGA category 03.
- **Waste treatment methods**
  - Dispose of contents/container in accordance with licensed collector’s sorting instructions.
- **Product/Packaging disposal recommendations**
  - Remove waste in accordance with local and/or national regulations. Remove to an authorized waste treatment plant.
- **Additional information**

---

### SECTION 14: Transport information

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

#### 14.1. UN number

**Calcium Citrate Tetrahydrate (5785-44-4)**
- **UN-No. (ADR)**
  - Not regulated
- **UN-No. (IMDG)**
  - Not regulated
- **UN-No. (IATA)**
  - Not regulated
- **UN-No. (ADN)**
  - Not applicable
- **UN-No. (RID)**
  - Not applicable

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#### 14.2. UN proper shipping name

**Calcium Citrate Tetrahydrate (5785-44-4)**
- **Proper Shipping Name (ADR)**
  - Not regulated
- **Proper Shipping Name (IMDG)**
  - Not regulated
- **Proper Shipping Name (IATA)**
  - Not regulated
- **Proper Shipping Name (ADN)**
  - Not regulated for transport
- **Proper Shipping Name (RID)**
  - Not regulated for transport

---

#### 14.3. Transport hazard class(es)

**ADR**
- **Transport hazard class(es) (ADR)**
  - Not regulated

**IMDG**
- **Transport hazard class(es) (IMDG)**
  - Not regulated

**IATA**
- **Transport hazard class(es) (IATA)**
  - Not regulated
Calcium Citrate Tetrahydrate
Safety Data Sheet
According to Regulation (EU) 2015/830 (REACH Annex II)

ADN
Transport hazard class(es) (ADN) : Not applicable

RID
Transport hazard class(es) (RID) : Not applicable

14.4. Packing group
Packing group (ADR) : Not regulated
Packing group (IMDG) : Not regulated
Packing group (IATA) : Not regulated
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

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

14.6. Special precautions for user
Overland transport
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Transport regulations (ADN) : Not subject

Rail transport
Transport regulations (RID) : Not subject

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
Calcium Citrate Tetrahydrate is not on the REACH Candidate List
Calcium Citrate Tetrahydrate is not on the REACH Annex XIV List

VOC content : 0 %
Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. Chemical safety assessment
No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

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

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.