# SAFETY DATA SHEET
# SYMBIO LIQUID CALCIUM

**SDS COMPLETED 25TH MARCH 2022** **VERSION 02**
**REPLACES 1 JULY 2015**

## 1. Identification of the preparation and company

### 1.1 Product identifier

Symbio Liquid Calcium

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

Use as a horticultural/amenity fertiliser

### 1.3 Details of the supplier of the Safety Data Sheets:

**Company name:**
Origin Amenity Solutions Ltd
1-3 Freeman Court,
Jarman Way,
Orchard Road,
Royston,
Hertfordshire,
SG8 5HW
**Tel:** 0800 138 7222
**Email:** sales.symbio@originamenity.com

### 1.4 Emergency phone number

| | |
|---|---|
| **Emergency phone No.** | 0800 138 7222 (09.00 – 17.00 GMT Monday – Friday) |
| **National emergency telephone number** | 111 |

## 2. hazards identification

### 2.1 Classification of the substance or mixture

**CLASSIFICATION according to Directive EC 1272/2008 Classification, Labelling and Packaging**
Eye Irrit.. 2
Eye irritation, Category 2, H319 Causes serious eye irritation.

### 2.2 Label Elements

**Symbio Calcium**
(contains: Calcium chloride)

**Signal word: Warning**
**Hazard statements:**
Eye Irrit. 2: H319 Causes serious eye irritation.
**Precautionary phrases:**
P264: Wash thoroughly after use
P280: Wear protective gloves / eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.

### 2.3 Other Hazards

Mixture not classified as PBT or vPvB

## 3. COMPOSITION OF INGREDIENTS

### 3.2 Mixtures

Mixture of inorganic substances

| Chemical Name | CAS-No. | Classification | Concentrations [%] |
|---|---|---|---|
| Calcium chloride | 10043-52-4 | Eye Irrit. 2: H319<br>Warning | 10% – <25% |
| 2-methylisothiazol-3(2H)-one | 2682-20-4 | Acute Tox. 2: H330;<br>Acute Tox. 3: H301+H311;<br>Aquatic Acute 1: H400;<br>Aquatic Chronic 1: H410;<br>Eye Dam. 1:H318;<br>Skin Corr. 1B: H314;<br>Skin Sens. 1A: H317;<br>EUH071 - Danger | <1% |

**Other information**

| Identification | M-Factor | |
|---|---|---|
| 2-methylisothiazol-3(2H)-one<br>CAS: 2682-20-4 | Acute | 10 |
| | Chronic | 1 |

## 4. First Aid Measures

### 4.1 Description of First Aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:**

This product is not classified as hazardous through inhalation. However, in case of intoxication symptoms it is recommended to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or if necessary shower the affected person thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:**

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

### 4.2 Most important symptoms and effects, both acute and delayed

Indicated in sections 2 and 11

### 4.3 Indication of any immediate medical attention and special treatment:

Not applicable

## 5. Fire Fighting Measures

### 5.1 Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use, preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

### 5.2 Unsuitable extinguishing media:

Not applicable
As suited to surrounding fire

### 5.3 Special hazards, combustion or by products:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

### 5.4 Protective clothing for fire fighting:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...).

**Additional provisions:**

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## 6. Accidental release measures

### 6.1 Personal precautions:

Prevent contact with skin or eyes
The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified.
Ensure adequate ventilation
Use personal protective equipment,
- Gloves
- Eye protection

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection

### 6.2 Environmental precautions:

Avoid spillage into the aquatic environment as it contains substances potentially dangerous for this. Contain the product absorbed in hermetically sealed containers. In the case of serious spillage into the aquatic environment notify the relevant authority.

### 6.3 Clean & disposal methods:

Use soil, sand or other absorbent material. Do not absorb in sawdust or other combustible material. Contact specialist waste disposal contractor.

### 6.4 Reference to other sections

See also section 8 and section 11.

## 7. Handling and Storage

### 7.1 Precautions for safe handling:

A.- General precautions for safe use
Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.
B.- Technical recommendations for the prevention of fires and explosions
Product is non-flammable under normal conditions of storage, handling and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.
C.- Technical recommendations on general occupational hygiene
Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.
D.- Technical recommendations to prevent environmental risks
It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

### 7.2 Conditions and quantity limits for safe storage:

Store in a cool, dry atmosphere in original, labelled containers.
Minimum temp: 5°C
Maximum temp: 30°C
Avoid sources of heat, radiation, static electricity, and contact with food.

### 7.3 Specific end use(s)

No Information available

## 8. Exposure controls / personal protection

### 8.1 Exposure limit values:

No applicable occupational exposure limits for the substances in this product

**DNEL (workers)**

| Substance | Route of exposure | Short Exposure | | Long exposure | |
|---|---|---|---|---|---|
| | | Systemic | Local | Systemic | Local |
| Calcium Chloride CAS: 10043-52-4 | Inhalation | N/A | 5 mg/m$^3$ | N/A | 2.5 mg/m$^3$ |
| 2-methylisothiazol-3(2H)-one CAS 2682-20-4 | Inhalation | N/A | 0.043 mg/m$^3$ | N/A | 0.021 mg/m$^3$ |

**DNEL (General Population)**

| Substance | Route of exposure | Short Exposure | | Long exposure | |
|---|---|---|---|---|---|
| | | Systemic | Local | Systemic | Local |
| Calcium Chloride CAS: 10043-52-4 | Inhalation | N/A | 10 mg/m$^3$ | N/A | 5 mg/m$^3$ |
| 2-methylisothiazol-3(2H)-one CAS 2682-20-4 | Inhalation | N/A | 0.043 mg/m$^3$ | N/A | 0.021 mg/m$^3$ |
| | Oral | 0.053 mg/kg | N/A | 0.027 mg/kg | N/A |

**PNEC:**

| | | | | |
|---|---|---|---|---|
| 2-methylisothiazol-3(2H)-one CAS 2682-20-4 | **STP** | 0.23 mg/L | **Fresh water** | 0.00339 mg/L |
| | **Soil** | 0.047 mg/kg | **Marine water** | 0.00339 mg/L |
| | **Intermittent** | 0.00339 mg/L | **Sediment (fresh water)** | N/A |
| | **Oral** | N/A | **Sediment (marine water)** | N/A |

## 8.2 Occupational exposure controls:

The following precautions are considered to be good practice when using any chemicals irrespective of their classification

A- Individual protection

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding safety markings

B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

C.- Specific protection for the hands

Use protective gloves. For prolonged use recommend use of CE III gloves

D – Eye and Face protection

Recommend use of panoramic glasses to protect against splash

E – Body protection

Wear suitable work clothing and anti-slip shoes

Access to emergency shower and eyewash stations

## 9. Physical and chemical properties

**Appearance:**

Physical state at 20 ºC: Liquid

Appearance: Not available

Colour: Not available

Odour: Not available

Odour threshold: Non-applicable *

**Volatility:**

Boiling point at atmospheric pressure: 100 ºC

Vapour pressure at 20 ºC: 2350 Pa

Vapour pressure at 50 ºC: 12381 Pa (12.38 kPa)

Evaporation rate at 20 ºC: Non-applicable *

**Product description:**

Density at 20 ºC: 1125.9 kg/m³

Relative density at 20 ºC: 1.2 - 1.26

Dynamic viscosity at 20 ºC: Non-applicable *

Kinematic viscosity at 20 ºC: Non-applicable *

Kinematic viscosity at 40 ºC: Non-applicable *

Concentration: Non-applicable *

pH: 4.5 - 5.5

Vapour density at 20 ºC: Non-applicable *

Partition coefficient n-octanol/water 20 ºC: Non-applicable *

Solubility in water at 20 ºC: Non-applicable *

Solubility properties: Non-applicable *

Decomposition temperature: Non-applicable *

Melting point/freezing point: Non-applicable *

**Flammability:**

Flash Point: Non Flammable (>60 ºC)

Flammability (solid, gas): Non-applicable *

Autoignition temperature: Non-applicable *

Lower flammability limit: Non-applicable *

Upper flammability limit: Non-applicable *

**Particle characteristics:**

Median equivalent diameter: Non-applicable

**9.2 Other information:**
**Information with regard to physical hazard classes:**
Explosive properties: Non-applicable *
Oxidising properties: Non-applicable *
Corrosive to metals: Non-applicable *
Heat of combustion: Non-applicable *
Aerosols-total percentage (by mass) of flammable components:
Non-applicable *
**Other safety characteristics:**
Surface tension at 20 ºC: Non-applicable *
Refraction index: Non-applicable *

*Not relevant due to the nature of the product

## 10. Stability and reactivity

### 10.1 Reactivity
None expected

### 10.2 Chemical stability
Stable under normal conditions

### 10.3 Possibility of hazardous reactions
None expected

### 10.4 Conditions to avoid
Extremes of temperature

### 10.5 Incompatible materials
Avoid strong acids/ alkalis and oxidising materials

### 10.6 Hazardous decomposition products
complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

## 11. Toxicological information
In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:
A- Ingestion (acute effect):
- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.
B- Inhalation (acute effect):
- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):
- Contact with the skin: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Produces eye damage after contact.
D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
IARC: Non-applicable
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
E- Sensitizing effects:
- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with sensitising effects. For more information see section 3.
F- Specific target organ toxicity (STOT) - single exposure:
Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
G- Specific target organ toxicity (STOT)-repeated exposure:
- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
H- Aspiration hazard:
Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3

**Specific toxicity information on the substances**

| Substance | Acute toxicity | | Organism |
|---|---|---|---|
| Calcium Chloride<br>CAS: 10043-52-4 | LD50 oral | 2301 mg/kg | Rat |
| | LD50 dermal | 5100 mg/kg | Rabbit |
| | LC50 inhalation | N/A | |
| 2-methylisothiazol-3(2H)-one<br>CAS 2682-20-4 | LD50 oral | 120 mg/kg | Rat |
| | LD50 dermal | 242 mg/kg | Rat |
| | LC50 inhalation | N/A | |

**Acute Toxicity Estimate (ATE mix)**
Oral: >5000 mg/kg (calculation method)
Dermal: >5000 mg/kg (calculation method)
Inhalation: >20 mg/L (calculation method)

## 12. Ecological information

### 12.1 Ecotoxicity:

**Acute Toxicity**

| Substance | Concentration | | Species | Organism |
|---|---|---|---|---|
| Calcium Chloride<br>CAS: 10043-52-4 | LC50 | 4630 mg/L (96 h) | *Pimephales promelas* | Fish |
| | EC50 | 2400 mg/L (48 h) | *Daphnia magna* | Crustacean |
| | EC50 | 27000 mg/L (72 h) | *Pseudokirchneriella subcapitata* | Algae |

| | | | | |
|---|---|---|---|---|
| 2-methylisothiazol-3(2H)-one<br>CAS 2682-20-4 | LC50 | 4.77 mg/L (96 h) | *Oncorhynchus mykiss* | Fish |
| | EC50 | 0.934 mg/L (48 h) | *Daphnia magna* | Crustacean |
| | EC50 | N/A | | |

**Chronic Toxicity**

| Substance | Concentration | | Species | Organism |
|---|---|---|---|---|
| Calcium Chloride<br>CAS: 10043-52-4 | NOEC | 230 mg/L | *Oncorhynchus mykiss* | Fish |
| | NOEC | 481 mg/L | *Daphnia magna* | Crustacean |
| 2-methylisothiazol-3(2H)-one<br>CAS 2682-20-4 | NOEC | 4.93 mg/L | *Oncorhynchus mykiss* | Fish |
| | NOEC | 0.044 mg/L | *Daphnia magna* | Crustacean |

### 12.2 Mobility:

| Substance | Absorption/desorption | | Volatility | |
|---|---|---|---|---|
| 2-methylisothiazol-3(2H)-one<br>CAS 2682-20-4 | Koc | N/A | Henry | 0E+0 Pa·m³/mol |
| | Conclusion | N/A | Dry soil | N/A |
| | Surface Tension | N/A | Moist soil | N/A |

### 12.3 Persistence & degradability:

| Substance | Degradability | | Biodegradability | |
|---|---|---|---|---|
| 2-methylisothiazol-3(2H)-one<br>CAS 2682-20-4 | BOD5 | N/A | Concentration | 10 mg/L |
| | COD | N/A | Period | 28 days |
| | BOD5/COD | N/A | % Biodegradable | 55.8% |

### 12.4 Bioaccumulative potential:

| Substance | Bioaccumulation potential | |
|---|---|---|
| 2-methylisothiazol-3(2H)-one<br>CAS 2682-20-4 | BCF | |
| | Pow Log | -0.49 |
| | Potential | |

## 13. Disposal considerations

### 13.1 Disposal of used preparation:

Waste code: 06 10 99
Waste Class: Non dangerous
Dispose in accordance with local regulations.

## 14. Transport information

Product is not classified for transport (ADR/RID, IMDG, IATA)

## 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

This substance is classified and labelled in accordance with regulation 1999/45/EC, 1272/2008, the statutory instrument No.716 2009 Chemicals (Hazard Information and Packaging) regulations and the EC Fertiliser Regulations 2003, Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93

and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

**Other legislation:**
The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.
Control of Substances Hazardous to Health Regulations 2002 (as amended)
EH40/2005 Workplace exposure limits.

## 16. Other information

**Legislation related to safety data sheets:**
This safety data sheet has been designed in accordance with ANNEX II-The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.
**Texts of the legislative phrases mentioned in section 2:**
H319: Causes serious eye irritation.
**Texts of the legislative phrases mentioned in section 3:**
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3
**Hazard statements**
Acute Tox. 2: H330 - Fatal if inhaled.
Acute Tox. 3: H301+H311 - Toxic if swallowed or in contact with skin.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Eye Dam. 1: H318 - Causes serious eye damage.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.
Skin Sens. 1A: H317 - May cause an allergic skin reaction.
**Classification procedure:**
Eye Irrit. 2: Calculation method
**Advice related to training:**
Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.
**Principal bibliographical sources:**
http://echa.europa.eu
http://eur-lex.europa.eu
**Abbreviations and acronyms:**
ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

**Disclaimer**

The information in this SDS was obtained from sources which we believe to be reliable. Origin Amenity Solutions provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate handling of the product by properly trained and qualified personnel. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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