

**SAFETY DATA SHEET**  
**VitaFer Ca-Amical – Liquid Foliar Fertilizer**

**SECTION 1 IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY**

1.1 Product identifier	<b>VitaFer Ca-Amical</b>
1.2 Relevant identified uses	Fertilizer for fertilizing farm plants, vegetables and orchard plants
1.2 Uses advised against	other than the ones mentioned above
1.3 Details of the supplier	VITAFER Sp. z o.o. Sp.k. 19 Aleja Krakowska str., 05-555 Tarczyn
Responsible for the Safety Data Sheet	office@vitafer.pl
1.4 Emergency telephone number	112
Prepared on	01-01-2020 (version 01)

**SECTION 2 HAZARDS IDENTIFICATION**

**Classification of the mixture**

**2.1.1 Classification according to Regulation (EC) 1272/2008** (See SECTION 16 for full text of the H phrases)

Causes serious eye irritation, cat. 1 – H319

Harmful to aquatic life with long lasting effects, cat. 3 – H412

**2.2 Label elements in compliance with Regulation (EC) 1272/2008**

Hazard pictograms:



Signal word: **Warning**

*Hazard statements:*

**H 319** Causes serious eye irritation.

**H 412** Harmful to aquatic life with long lasting effects.

*Precautionary statements:*

**P 264** Wash hands and face thoroughly after handling.

**P 273** Avoid release to the environment.

**P 280** Wear eye protection.

**P 305 + P 351 + P 338** If in eyes. Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. continue rinsing.

**P 337 + P 313** If eye irritation persists: Get medical advice/attention.

**P 501** Dispose of contents/container as hazardous waste.

### 2.3 Other hazards

Additional text on the label.

“EC Fertilizer”

“Type D 2. A solution of calcium chloride with micronutrients: manganese (Mn) and zinc (Zn)”

PBT and vPvB criteria: The criteria for the identification of PBT and vPvB properties according to Annex XIII of REACH do not apply to inorganic substances.

## SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

### A mixture calcium chloride, manganese chloride tetrahydrate and zinc chloride.

Name of the substance	Index number	CE number	CAS number	weighted %	EC No. 1272/2008 classification
Calcium chloride 50%	01-211949219-28-XXXX	233-140-8	10043-52-4	80-90%	H 319
Manganese chloride tetrahydrate	Pending registration	231-869-6	13446-34-9	1.5-<1.9%	H 302; H 411
Zinc chloride*	01-2119472431-44-XXXX	231-591-0	7646-85-7	1-≤1.1%	H 302; H 314 H 400; H 410

(See SECTION 16 for full text of the H phrases)

**\*Specific limit concentration for:**

**Calcium chloride:**

C>=10.0 Eye Irrit. 2 H319

**Zinc chloride:**

C>=5.0 STOT SE3 / H335

## SECTION 4 FIRST AID MEASURES

### 4.1 Description of first aid measures

**General remarks** – Remove contaminated clothing and shoes. In the event of exposure or contact: consult/visit a doctor. Show the container or label.

**Inhalation** – Remove from the area of exposure to fresh air. In the event of breathing problems, seek medical attention.

**Skin contact** – Remove contaminated clothing, wash skin with a lot of water. If skin is irritated, consult a dermatologist.

**Eye contact** – Irrigate copiously with water for at least 15 minutes, holding the eyelids apart. Remove contact lenses. Avoid strong water jet due to risk of damage to cornea. Seek medical advice immediately.

**Ingestion** – Paramedic care typical in cases of acute poisoning is gastric lavage. Call the doctor or seek medical attention. Do not give any medicines to the unconscious person.

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

**Eyes:** pain, reddening.

**Skin:** reddening, dryness.

**Inhalation:** cough, sore throat.

**Ingestion:** stinging, diarrhoea, vomiting.

### 4.3 Indication of immediate medical attention and special treatment needed

Hand the doctor the safety data sheet of the mixture.

## SECTION 5 FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable extinguishing media:** the product is non-flammable. Use extinguishing media suited to the materials stored in the immediate vicinity.

**Extinguishing media not to be used:** not specified

### 5.2 Special hazards arising from the mixture

During fire dangerous smoke and vapours may be produced. It emits toxic chloride vapours when reaching the decomposition temperature. May produce hydrochloride in the presence of phosphoric and sulphuric acid or water in high temperature.

### 5.3 Advice for fire-fighters

Do not stay in the danger zone without appropriate chemical protective clothing and a self-contained breathing apparatus.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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

For non-emergency personnel

- Protective equipment – for personal protective equipment see section 8 – prevention of skin and eye contamination.
- Emergency procedures – not specified

For emergency responders: not specified

### 6.2 Environmental precautions

Do not allow large quantities of the substance enter the sewerage system and water reservoirs. Prevent further spreading.

### 6.3 Methods and materials for containment and cleaning up

The released product must be put in a waste container (use industrial vacuum cleaners or sprinkle with a sorbent). Dispose of in accordance with the applicable regulations.

### 6.4 Reference to other sections.

**Section 8.**

## SECTION 7 HANDLING AND STORAGE

### 7.1 Precautions for safe handling

- Fire precautions: the product is non-flammable
- Precautions against the generation of aerosols – not specified
- Environment protection measures – the product must be used in accordance with the manufacturer's instructions (appropriate dilution)

Follow the occupational health and safety regulations and use protective equipment (see section 8). Avoid contamination of eyes and skin.

Do not eat, drink or smoke while using the product. Wash hands after the use.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in the original, closed and appropriately marked containers. Avoid exposure to high temperatures and direct sunlight. The appropriate range of storage temperature is +5°C to +30°C (the optimum temperature is 25°C). Store in a dry and well ventilated place. Secure the containers against physical damage. The warehouse should be locked and inaccessible for unauthorised persons.

On contact with bases an exothermic reaction may be triggered.

Incompatible materials – boron trifluoride, vinyl methyl ether, water (exothermic solution in water)

Inappropriate working materials: steel

### 7.3 Specific end use(s)

No additional instructions.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control parameters

Permissible national occupational exposure limits

Manganese chloride tetrahydrate: TLV-TWA 0.3 mg/m<sup>3</sup> (manganese and its inorganic compounds – expressed in Mn)  
TLV-STEL no data available  
Manganese chloride: TLV-TWA 1 mg/m<sup>3</sup> (smoke)  
TLV-STEL 2 mg/m<sup>3</sup> (smoke)  
TLV-CL no data available

Legal basis: The decree of the Minister of Labour and Social Policy of 29.11.2002 on maximum allowable concentrations and threshold limit values of agents with adverse health effects in workplace (Journal of Laws No. 217 item 1833).

### Monitoring methods:

- PN-EN 14042 Workplace atmospheres. The guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

### DNEL values:

Zinc chloride:

Skin 8.3 mg Zn/kg bw/day; workers; long-term systemic effects

Inhalation 1 mg Zn/m<sup>3</sup> workers; long-term systemic effects

Oral 0.83 mg Zn/kg society; long-term systemic effects

Skin 8.3 mg Zn/kg bw/day; society; long-term systemic effects

Inhalation 1,3 mg Zn/m<sup>3</sup> society; long-term systemic effects

### PNEC values

Zinc chloride: Sea water – 6.1 µg/l  
Fresh water – 20.6 µg/l  
Fresh water sediment – 117.8 mg/kg dw  
Sea water sediment – 56.5 mg/kg dw  
Soil – 35.6 mg/kg dw

## 8.2 Exposure controls

### Appropriate engineering controls

Provide general ventilation and local exhaust ventilation. Do not smoke in the workplace. Do not eat and drink while handling the product. Wash hands carefully with soap and water after finishing work, after a break, before eating, smoking, using the toilet.

### Individual protection measures:

- Eye and face protection – protective goggles with side protection in accordance with PN – EN 166
- Hand protection – protective gloves tested and chosen based on the standards PN-EN 374-2 and 374-3, recommended:
  - Full contact: natural rubber, 0.6 mm thick, resistance time >480 min
  - Spray: polypropylene, 0.65 mm thick, resistance time >240 min
- Respiratory protection – AP filters required when vapours/aerosols are generated
- Skin protection – protective clothing
- Environmental exposure controls – do not allow the product to enter the sewerage system. Prevent further spreading if it is safe. In rivers, lakes or sewage are contaminated with the product, inform authorities.

### 8.3 Environmental exposure controls

Before the product is used, assess the occupational risk and take appropriate preventive measures.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	Test method
Appearance	Clear pale yellow solution Organoleptic
Odour	Typical Organoleptic
Odour threshold	N/A
pH of 1% solution	4.0 – 5.0 Potentiometer
Melting/freezing point	No data available

Boiling point and boiling range	No data available	
Flash point	No data available	
Evaporation rate	No data available	
Flammability (solid, gas)	N/A	
Upper/lower flammability limit	N/A	
Upper/lower explosive limit	N/A	
Vapour pressure	No data available	
Vapour density	No data available	
Relative density	1.35 kg/l	No data available
Water solubility	Soluble in water	
Partition coefficient n-octanol/water	No data available	
Auto-ignition temperature	No data available	
Decomposition temperature	No data available	
Viscosity	No data available	
Explosive properties	No data available	
Oxidizing properties	No data available	

## 9.2 Other information none

## SECTION 10 STABILITY AND REACTIVITY

### 10.1. Reactivity

Non-reactive while stored, used and applied under normal conditions.

### 10.2. Chemical stability

The product is stable under recommended use and storage conditions.

### 10.3. Possibility of hazardous reactions

An exothermic reaction may be triggered in contact with boron trifluoride, vinyl methyl ether.

### 10.4. Conditions to avoid

Keep away from high temperature and direct sunlight. Avoid changes in temperature. Do not allow the temperature to drop below 5°C.

### 10.5. Incompatible materials No data available

No data available.

### 10.6. Hazardous decomposition products

It emits toxic chloride vapours when reaching the decomposition temperature. May produce hydrochloride in the presence of phosphoric and sulphuric acid or water in high temperature.

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects of the mixture

**Acute toxicity:** no data on the mixture available

**Skin irritation/corrosion:** no data on the mixture available

**Eye irritation/damage:** no data on the mixture available

**Respiratory or skin sensitisation:** no data on the mixture available

**Mutagenicity:** no data on the mixture available

**Carcinogenicity:** no data on the mixture available

**Reproductive toxicity:** no data on the mixture available

**Specific target organ toxicity – single exposure:** no data on the mixture available

**Specific target organ toxicity – repeated exposure:** no data on the mixture available

**Aspiration risk:** no data on the mixture available

### Information on the probable ways of exposure

Eyes – possible irritation.

### Symptoms related to physical, chemical and toxicological properties

No data available

### Delayed, direct or chronic effects of short-term and long-term exposure

Eyes – irritation

### Interaction effects

No data available

### Data on the components

Calcium chloride: - anhydrous substance

Eye irritation/damage: Eye irritation, Category 2,

Causes eye irritation,  
Method: OECD guidelines 405  
Species: rabbit  
Exposure through: eyes  
Result: strong irritation

## SECTION 12 ECOLOGICAL INFORMATION

### 12.1 Toxicity - no data on the mixture available

Data on the components:

#### Anhydrous zink chloride

Fish: LC50 = 1.6 – 2.7 mg/l *Oncorhynchus kisutch* (fresh water), another method

Crustaceans: EC50 (48 h) = 158 µg/l *Daphnia magna*, another method

Algae/aquatic plants: NOEC (35 days) = 560 µg/l *Clorella vulgaris*, another method

Microorganisms: EC50 = approx. 30 mg/l industrial active sediment, another method

Chronic toxicity (long-term):

Fish: LOEC (20 days) = 1 – 20 mg/l *Brachydanio rerio* (fresh water), another method

Crustaceans: EC16 (21 days) = 70 µg/l *Daphnia magna*, another method

#### Manganese ions:

Toxic for aquatic organisms.

Toxicity threshold for tubifex (*policelis nigra*) 660 mg/l. CE0 (microregma) 31 mg/l.

Toxicity for fish: CL0 (orfe) 2490 mg/l.

Trout 2.91 mg/l (28 days)

Toxicity for daphnia: CL0 (*daphnia magna*) 50 mg/l.

Acute toxicity: *Pseudomonas putida* 10.6 mg/l.

*Photobacterium phosphoreum* 14.7 mg/l.

In running water, depending on the mixture, the toxicity is moderate to high.

**12.2. Persistence and degradability** – The degradability determination methods do not apply to inorganic substances.

**12.3 Bioaccumulative potential** – No bioaccumulation. The log pow does not apply to dissociating inorganic substances.

Components:

**12.4 Mobility in soil** – no data on the mixture available.

**12.5 Results of PBT and vPvB assessment** – no data on the mixture available.

**12.6. Other adverse effects** – no data on the mixture available.

## SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods:

Empty, not cleaned container – recycling

Mixture – dilute with water, it is not recommended to drain the product that is not diluted.

Sorbent with the mixture – consult an expert

Waste catalogue no.:

02 01 08\* - Agrochemical waste containing dangerous substances, including pesticides of I and II toxicity class (very toxic and toxic)

15 01 10\* - Packaging containing residues of or contaminated by dangerous substances.

Recycling waste – key information – no data available

Sewage disposal – key information – no data available

Other instructions on waste treatment

The containers must be well emptied and then disposed of in accordance with the applicable regulations.

The waste must be treated appropriately, in consideration of the regional, national and European regulations as well as in consideration of the local conditions, by the entity whose business is waste treatment.

The regulations of the Waste Act of 14 December 2012 (Journal of Laws 2013, item 21) must be applied accordingly. The regulations of the act of 13 June 2013 on packaging and packaging waste management (Journal of Laws 2013, item 888) must be applied accordingly.

## SECTION 14 TRANSPORT INFORMATION

The product is not classified as hazardous in transport.

## SECTION 15 REGULATORY INFORMATION

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

### Special legal regulations referring to this mixture

Directive 96/82/EC and the decree of the Minister of Economy on the types and amount of dangerous substances whose presence in a facility make it a high risk facility or a facility with a high risk of a serious industrial emergency, dated 10 October 2013 (Journal of Laws 2013, item 1479).

**The mixture is not mentioned in an annex to this decree.**

#### EU regulations

1. 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 Directives 91/155/EEC, 93/67/EEC, 93/105/EEC AND 2000/21/EC. (Revision of the Regulation L136/3 of 29-05-2007)
2. Regulation EC No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
3. Commission Regulation (EU) No. 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
4. Regulation (EC) No. 2003/2003 of the European Parliament and of the Council of 13 October 2003 relating to fertilizers

#### National regulations:

5. Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws 2011, No. 63, item 322 as amended)
6. Act of 27 April 2011 – Environmental Protection Law - (uniform text, Journal of Laws 2013, No. 0, item 1232 as amended)
7. Decree of the Minister of Health, dated 20 April 2012, on the labelling of the packaging of dangerous substances and dangerous mixtures and some other mixtures (Journal of Laws 2012, No. 0, item 445 as amended)
8. Decree of the Minister of Health, dated 10 August 2012, on the criteria and method of the classification of chemical substances and their mixtures (Journal of Laws 2012, No. 0, item 1018 as amended)
9. Government order, dated 24 August 2004, on the list of works that the juveniles are not allowed to perform and the conditions in which they can perform those works (Journal of Laws 2004, No. 200, item 2047 as amended)
10. Government order, dated 10 September 1996, on the list of works that women are not allowed to perform (Journal of Laws 1996, No. 114, item 545 as amended)
11. Government announcement, dated 28 May 2013, on the amendments to the Annexes A and B to the European Agreement concerning the International Carriage of Dangerous Goods by Road ADR, concluded in Geneva on 30 September 1957, becoming effective (Journal of Laws 2013\_0\_815)
12. Act of 10 July 2007 on fertilizers and fertilization and its later amendments
13. Waste Act of 14 December 2012 (Journal of Laws 2012.21 as amended)

## 15.2 Chemical safety assessment

The manufacturer has not performed a chemical safety assessment of the mixture.

## SECTION 16 OTHER INFORMATION

List of amendments: N/A

### Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by ROAD

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by IATA

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by ICAO

IBC: International Bulk Chemical Code

DNEL: Derived No Effect Level

PNEC: Predicted No Effect Concentration

SVHC: Substance of Very High Concern

TLV-TWA: Threshold limit value - time-weighted average

TLV-STEL: Threshold limit value - short-time exposure limit

PBT: Persistent bioaccumulative toxic chemical

vPvB: very persistent and very bioaccumulative

LD50: Median lethal dose

LC50: Lethal concentration

EC50: Median effective concentration

NOEC: No observable effect concentration

### Classification according to Regulation (EC) 1272/2008

Causes serious eye irritation, cat. 1 – H319 – calculation method

Harmful to aquatic life with long lasting effects cat. 3 – H412 – calculation method

### Full text of H phrases and other abbreviations referring to Section 2 and 3

H 302	Harmful if swallowed
H 314	Causes severe skin burns and eye damage
H 319	Causes serious eye irritation
H 400	Very toxic to aquatic life
H 410	Very toxic to aquatic life with long lasting effects

H 411	Toxic to aquatic life with long lasting effects
H 412	Harmful to aquatic life with long lasting effects.
H 335	May cause respiratory irritation
STOT S3	Specific target organ toxicity

**Recommended training:**

- On-the-job training
- Training on the hazards related to the mixture and the preventive measures in the occupational hazard assessment
- Training on actions to be taken in the event of a release of the substance

**Other information**

The information above has been prepared based on our current knowledge and describe the product in terms of environmental protection and safe use. The information is no guarantee of the product quality or a quality specification of the product and no complaints can be based on the information.

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