

SAFETY DATA SHEET
Vitafer Extra Zn – Suspension Foliar Fertilizer

SECTION 1 IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1 Product identifier	Vitafer Extra Zn
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 Al. 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. Classification according to Regulation (EC) 1272/2008 (See SECTION 16 for full text of the H phrases)

Fire hazard – not classified

Health hazard – Acute toxicity, category 4 – Harmful if swallowed, Serious eye damage, category 1.

Ecotoxicological hazard – Acute toxicity to aquatic organisms, category 1

Chronic toxicity to aquatic life, category 1

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

Hazard pictograms:



Signal word: **Attention**

Hazard statements:

- H 319** Causes skin irritation
- H 315** Causes serious eye irritation.
- H 412** Harmful to aquatic life with long lasting effects

Precautionary statements:

- P 280** Wear protective gloves/protective clothing/eye protection/face protection.
- P 310** Immediately call a POISON CENTER or doctor
- 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 273** Avoid release to the environment
- P337+P313** IF EYE IRRITATION PERSISTS: Get medical advice/attention.
- P302+P352** IF ON SKIN: Wash with soap and water
- P 501** Dispose of contents/container as hazardous waste.

2.3 Other hazards

Additional text on the label.

“EC Fertilizer”

“Type E 1.7a sulphuric zinc salt”.

For professional use only.

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

The mixture

Name of the substance	Index number	CE number	CAS number	Concentration	EC No. 1272/2008 classification	1999/45/EC classification
Zinc sulphate heptahydrate	01-2119474684-27-XXXX	231-793-3	7446-19-7	>5-<10	H 302; H 318 H 400; H 410	Xn R22 Xi R41 N R50/53
Potassium hydroxide *	01-2119487136-33-XXXX	215-181-3	1310-58-3	>5-<10	H 302; H 314 H 290	Xn R22 C R35
Citric acid	01-2119457026-42-XXXX	201-069-1	5949-29-1	>5-<10	H319	Xi R36

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

*Specific limit concentration for:

Potassium hydroxide:

Skin Corr. 1A;	H314; C ≥ 5 %	C; R35:	C ≥ 5 %
Skin Corr. 1B;	H314; 2 % ≤ C < 5 %	C; R34:	2 % ≤ C < 5 %
Skin Irrit. 2;	H315; 0.5 % ≤ C < 2 %	Xi; R36/38:	0.5 % ≤ C < 2 %
Eye Irrit. 2;	H319; 0.5 % ≤ C < 2 %		

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

General remarks – Remove contaminated clothing and shoes and wash before using again.

Inhalation – Remove from the area of exposure to fresh air. In the event of breathing problems, call the doctor immediately.

Skin contact – Clean contaminated skin, wash with a lot of cold water. Consult a doctor.

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.

Ingestion – Do not give any medicines to the unconscious person. Seek medical attention and present the label of the product or the safety data sheet

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

Eyes: may cause pain, reddening, and mechanical damage. May cause serious irritation.

Skin: may cause burns. Symptoms: reddening, itching and pain.

Inhalation: irritates the respiratory system. Symptoms: cough and breathlessness.

Ingestion: as with other soluble zinc salts, zinc sulphate may hydrolyse into an acid after ingestion. It causes serious irritation and burns of the mouth, throat and the alimentary canal. Symptoms: vomiting, stomach ache, increased heart rate, hypotension, chronic lung oedema (liquids in the lungs), diarrhoea, kidney damage. Death occurs after the ingestion of 10 g.

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 sulphur, carbon, zinc and potassium oxides may be produced.

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

Remove all sources of ignition. Provide adequate ventilation. Use personal protective equipment mentioned in section 8.

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). Seal off gullies. Dispose of selectively 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

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

Do not eat, drink or smoke in the places where the product is used, handled or transported.

Workers must wash hands and face before eating, drinking or smoking.

7.2 Conditions for safe storage, including any incompatibilities

Store in the original, closed and appropriately marked containers. The warehouse should be locked and inaccessible for unauthorised persons. 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.

Avoid contact with lead, calcium, strontium salts, sodium borate, carbonates and alkali hydroxides.

7.3 Specific end use(s)

No additional instructions.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Permissible national occupational exposure limits

Potassium hydroxide:	TLV-TWA	0.5 mg/m ³	TLV-STEL	1 mg/m ³
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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).

DNEL values:

Potassium hydroxide:

Workers - long-term systemic effects; effect on respiratory tract 1 mg/kg bw/day

PNEC values

The level of **citric acid** does not affect the environment:

Fresh water – 0.44 mg/l

Sea water – 0.044 mg/l

8.2 Exposure controls

Appropriate engineering controls

If the user generates dust, gas, vapour or mist, use process barriers, local exhaust vents or other technical safety devices that help maintain the level of exposure under the statutory limits.

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. Recommended materials: nitrile, certified (A, K, L)
- Respiratory protection – AP filters required when vapours/mists 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
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9.1 Information on basic physical and chemical properties	Test method
Appearance	Grey suspension
Odour	Typical
Odour threshold	N/A
pH of 1% solution	3.5 – 4.5
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	1.3 kg/l
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

No data available.

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

lead, calcium, strontium salts, sodium borate, carbonates and alkali hydroxides.

10.6. Hazardous decomposition products

During fire or on heating it may produce sulphur, carbon, zinc and potassium oxides.

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

Data on the components

Zinc sulphate heptahydrate:

Ingestion: LD50 (oral, rat): 2949 mg/kg (anhydrous substance)

Acute toxicity, category 4, oral: Harmful if swallowed.

Main symptoms: sedation, paralysis, diarrhoea
Inhalation Main symptoms: no data available
Skin Main symptoms: no data available
Skin irritation/corrosion:
Skin irritation test (rabbit) – light (anhydrous substance).
Eye irritation/damage:
Serious eye damage, category 1 – Causes serious eye damage.
Causes skin sensitisation and the sensitisation of the respiratory system: Local lymphatic test, mouse – negative.
Mutagenicity: Genetic mutagenicity, Ames test (in vitro), Salmonella typhimurium – negative.
Genetic mutagenicity, Ames test (in vitro), cytogenetic test, rat – negative chromosome aberration.
Carcinogenicity: Test on mice showed no carcinogenic properties.

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity - no data on the mixture available
12.2. Persistence and degradability – does not apply to inorganic substances
12.3 Bioaccumulative potential does not apply to inorganic substances
12.4 Mobility in soil – no data on the mixture available.
12.5 Results of PBT and vPvB assessment – not classified.
12.6. Other adverse effects – no data on the mixture available.

Data on the mixture component:

Zinc (II) sulphate (VI) heptahydrate – Nr. CAS: 7446-19-7

Toxicity for fish: *Jordanella floridae* LC50: > 1.5 mg/l/96 h (anhydrous substance)

Toxicity for aquatic invertebrates: *Daphnia magna* EC50: 0.75 mg/l/48 h (anhydrous substance)

Toxicity for aquatic plants: *Ankistrodemus falcatus* EC50: 32 mg/l/4 h (anhydrous substance)

Toxicity for bacteria: *Eulenea* sp. NOEC50: ≥ 1.95 g/l/7 day (anhydrous substance)

Acute toxicity to aquatic life, category 1: Very toxic to aquatic life.

Chronic toxicity to aquatic life, category 1: Toxic to aquatic life with long lasting effects

SECTION 13 DISPOSAL CONSIDERATIONS

Do not drain into the sewerage system. Avoid contamination of surface and ground water.
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.

13.1 Waste treatment methods

The waste code and the method of waste treatment should be consulted with the local Environmental Protection Office. The containers must be well emptied and then disposed of in accordance with the applicable regulations. Not cleaned containers must be treated as product rests. Do not remove labels from the containers.

SECTION 14 TRANSPORT INFORMATION

Road transport (ADR) and railway transport (RID)

UN3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS MATERIAL, LIQUID, N.O.S.

Technical name: Zinc sulphate

Class 9

GP III

Label 9

Environmental hazards: N/A

Sea (IMDG)

UN3082

Proper shipping name: ENVIRONMENTALLY HAZARDOUS MATERIAL, LIQUID, N.O.S.

Technical name: Zinc sulphate

Class 9

GP III

Label 9

MARINE POLLUTANT – yes

EMS F-A,S-F

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

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

H 290	May be corrosive to metals
H 302	Harmful if swallowed
H 318	Causes serious eye damage
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

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

Mixture classification method

Conventional calculation method and pH of the mixture.

Abbreviations and acronyms:

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

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.

List of amendments: N/A