

SAFETY DATA SHEET

according to Reg. (EC) No 1907/2006 modified by Reg. (EU) No 2020/878

Section 1: Identification of mixture and of the company/undertaking

- 1.1. Product identifier:** **ORGANIT – Iron**
- 1.2. Relevant identified use:** EK fertilizer, liquid mixture of chelated micro-nutrients for professional users only
Uses advised against: used otherwise than above
- 1.3. Details of the distributor and supplier of the safety data sheet:**
ALPHAVET Állatgyógyászati Zrt.
Headquarters: H-1194 Budapest, Hofherr Albert u. 42, Hungary
Location: H-8000 Székesfehérvár, Homokos 7. Hungary
Phone: +36 22 516 408
www.alphavet.hu
E-mail address of the person responsible for the safety data sheet: info@alpha-vet.hu

- 1.4. Emergency telephone numbers:**
Poison Control Centres in EU: <https://poisoncentres.echa.europa.eu/appointed-bodies>
Hungary: Health & Toxicological Information Service: 24 hr service: +36 1476 64 64

Section 2: Hazard identification

2.1. Classification of the mixture: the product is **hazardous mixture** according to manufacturer and in compliance with Reg. (EC) No 1272/2008 and its modifications.

Classification:		Hazard Class	Hazard category ¹
Health hazard:	Skin Irrit. 2	Skin Corrosion/Skin Irritation	2
	Eye Irrit. 2	Serious Eye Damage/Eye Irritation	2
	Repr. 1B	Reproductive Toxicity	1B
Environmental hazard:	Aquatic Chronic 3	Hazardous to the aquatic environment, long-term	3
Physical hazard:	not classified		

- 2.2. Label elements**
Pictograms: GHS07, GHS08
Signal word: DANGER

DANGER  	Hazard statements: H315 Causes skin irritation. H319 Causes serious eye irritation. H360FD May damage fertility. May damage the unborn child. H412 Harmful to aquatic life with long lasting effects. Precautionary statements: P264 Wash hands thoroughly after handling. P280 Wear protective gloves, protective clothing, eye protection/face protection. P302+P352 IF ON SKIN: Wash with plenty of water and soap. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose contents/container: transport to hazardous waste landfill site.
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Components that contribute to the classification of the product: iron (II) sulphate heptahydrate, boric acid

¹ The higher number represents less hazard.

2.3. Other hazards

The product contains SVHC substance (boric acid) greater than $\geq 0.1\%$.

Reason for inclusion boric acid to candidate list of substances of very high concern (SVHC) is that it is toxic for reproduction. Boric acid concentration is 1.15% in the product.

List is available at ECHA website: <http://echa.europa.eu/candidate-list-table>

Components of the product are not listed in the endocrine disruptor and potential endocrine disruptor databases.

Components of the mixture satisfy neither the PBT (persistent, bio-accumulative and toxic), nor the vPvB (very persistent, very toxic) criteria in accordance with Annex XIII of Reg. (EC) No 1907/2006.

Section 3: Composition/information on ingredients

3.1. Substance: does not apply.

3.2. Mixture: the product is a mixture, aqueous solution.

Composition: micro nutrients: iron (Fe^{2+}), zinc (Zn^{2+}), copper (Cu^{2+}), manganese (Mn^{2+}) in form of sulphate salts or chelates formed with EDDHSA (ethylenediamine-N,N'-di[(2-hydroxy-5-sulphophenyl)acetic acid]; CAS No: 57368-07-7 and 642045-40-7) and boric acid.

Hazardous components of the product which must be listed according to Reg (EU) No 2020/8780:

Hazardous components	Concentration	Hazard class, category, H-statement
Iron (II) sulphate heptahydrate CAS No: 7782-63-0 Index No: 026-003-001-4	15%	Acute Tox (oral) 4; Skin Irrit. 2, H315; Eye Irrit. 2, H319
Boric acid (H_3BO_3) CAS No: 10043-35-3 EC No: 233-139-2 Index No: 005-007-00-2	1 – 1.2%	Repr. 1B, H360FD
Manganese (II) sulphate hydrate* CAS No: 10034-96-5 EC No: 232-089-9 Index No: 025-003-00-4	0.3 – 0.5%	STOT RE 2, H373; Aquatic Chronic 2, H411
Copper (II) sulphate pentahydrate* CAS No: 7758-99-8 EC No: 231-847-6 Index No: 029-023-00-0	0.4%	Acute Tox. (oral) 4, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400, $M_{\text{(acute)}}$: 10; Aquatic Chronic 1, H410, $M_{\text{(chronic)}}$: 1 ATE (oral): 481 mg/kg bw
Zinc (II) sulphate monohydrate CAS No: 7446-19-7 EC No: 231-793-3 Index No: 030-006-00-9	0.1 – 0.3%	Acute Tox. (oral) 4, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 $M_{\text{(acute)}}$: 1, $M_{\text{(chronic)}}$: 1

* Substance has workplace exposure limit, see Section 8

The other components of the product are not hazardous, or their concentrations are low enough not to be taken into consideration in the classification and labelling of the product according to the relevant regulations.

Hazard classes, H statements relate to pure components. Hazard classification of the product is given in Section 2. Full texts of the H statements and hazard classes, categories are listed in Section 16.

Section 4: First Aid measures

4.1. Description of first aid measures

Fast and professional first aid measures can largely diminish progress and severity of the symptoms.

AFTER INHALATION: after inhalation of high volume of spray/mist move to fresh air and consult physician in case of persistent complaints.

SKIN CONTACT: wash the contaminated skin with running water and soap. If irritation and complaints persist call a physician.

EYE CONTACT: thoroughly flush eyes with large amount of lukewarm water at least 5 minutes while holding the eyelids wide open and moving the eyeballs. Remove contact lenses if easy to do it. If pain and tearing persist consult an eye specialist.

INGESTION: rinse mouth with water and drink 1-2 glasses of water. Contact a physician, show label or safety data sheet of the product.

4.2. Most important symptoms and effect, both acute and delayed: eye and skin irritation may occur. If swallowed it may irritate the mucous membranes and digestive tract.

4.3. Indication of any immediate medical attention and special treatment needed: if toxic symptoms develop or suspicion of intoxication occurs, stop the work and provide first aid and then seek medical advice immediately. Show the label and safety data sheet of the product.

Note to physician: symptomatic and supportive treatment is necessary. Specific antidote is not available.

Section 5: Fire-fighting measures

5.1. Extinguishing media: water jet, chemical foam, carbon dioxide, and dry powder.
Extinguishing measures have to suit surroundings.

Unsuitable extinguishing media: not known.

5.2. Special hazard arising from the mixture: at high temperature combustion and decomposition may produce toxic gases, vapours and fumes (sulphur oxides, carbon oxides, boron-containing compounds, etc.).

5.3. Advice for fire-fighters: wear full protective clothing, gloves and helmet, and positive pressure self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedure:

Avoid exposure, avoid eye and skin contact and wear personal protective equipment during collection of large spillages, see details in Section 8.

Accidental release measures should be carried out by trained personnel equipped with personal protective equipment.

6.2. Environmental precautions: ensure that the spilled material and its waste do not enter sewers, water bodies and groundwater. Dispose of waste material in accordance with local regulations.

6.3. Methods and material for containment and cleaning up: in the event of a major spillage, absorb large quantities of product into inert material (sand, vermiculite, earth, sawdust).

Collect contaminated absorbent in labelled containers, keep it closed and dispose of according to local regulations.

Contaminated area should be rinsed with water. Take care of slipping.

6.4. Reference to other sections: see Section 8 and 13.

Section 7: Handling and storage

7.1. Precautions for safe handling

Work carefully to avoid contact with skin and eyes and accidental ingestion.

Do not eat, drink or smoke when using.

Wash hands after handling the product, thorough washing or taking shower if possible is also recommended.

Precautions in case of fire and explosion: no special measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Store in the original container in frost free, cool area protected from sunlight.

Container should be properly labelled and tightly closed.

Keep out of reach of children.

Keep far away from foodstuff, drinks and feeding stuff.

Do not store together with incompatible materials.

Incompatible materials: alkaline and oxidizing agents.

Recommended temperature during storage: 5 – 40°C

7.3. Specific end use: fertilizer

Users should read and keep the safety instructions and measures for safe handling and usage.

Section 8: Exposure controls/personal protection

8.1. Control parameters/occupational exposure limits

Limit values in workplace air established in 5/2020. (II.6.) Hungarian ITM decree and Dir. (EU) No 2017/164

Copper and its compounds (calculated as copper): ÁK: 0.1 mg/m³, CK: 0.2 mg/m³

Manganese and its inorganic salts (calculated as Mn): ÁK: 0.2 mg/m³ (inhalable)
0.05 mg/m³ (respirable)

boric acid²: TWA: 0.5 mg/m³; STEL: 1 mg/m³ and 10 mg/m³ – inhalable fraction in form of aerosol

8.2. Exposure controls

Work carefully to avoid exposure with the product (skin and eye contact, inhalation of spray/mist).

General rules and good practices of handling chemicals should be followed.

Technical measures

- Provide personal protective equipment.

Hygiene measures

- Do not eat, drink or smoke while handling.
- Wash hands after work and at the beginning of every work break and before eating, drinking and smoking. After finishing work washing/showering is recommended.

Personal protective equipment

- Respiratory system protection:** not necessary.
- Hand protection:** Wear chemically resistant protective gloves according to EN 374 standard. When choosing the material of the gloves take in consideration the expected exposure to the product (short or long exposure time, mechanical stress, risk of full contact, risk of splash, etc.) and possibility of contact with other chemicals.
- Eye protection:** wearing EN 166 standard compliant safety glasses is necessary if splashing is possible, in case of handling large quantities, industrial operations and decontamination.
- Body protection:** should be selected depending on the use and expected exposure level (working clothes, protective clothes).

Environmental exposure control: no special measurement is necessary.

The information above relate to professional and intended use in average circumstances. If operation is done in different or exceptional circumstances, you should consult an expert to decide on additional necessary actions and personal protective equipment.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Appearance:	aqueous solution
Colour:	reddish - brownish
Odour:	not characteristic
Odour threshold:	not relevant
pH value at 20°C:	no data
Pouring point:	no data
Boiling point:	no data
Flash point:	no data, aqueous solution
Evaporation rate:	no data
Flammability (gas, solid):	not relevant
Explosion limits:	no data
Vapour pressure/density:	no data
Density at 20°C:	1.2±0.05 g/cm ³
Solubility in water:	unlimited
Partition coefficient, logP _{o/w} :	not relevant, the product is mixture
Auto ignition temperature:	no data
Decomposition temperature:	no data

² German limit values: http://limitvalue.ifa.dguv.de/WebForm_gw2.aspx (GESTIS)

Viscosity:	no data
Explosion properties:	no explosion hazard
Oxidising properties:	not oxidising

9.2. Other information

9.2.1. Information with regard to physical hazard classes: there are no test results, experiences which result in classification of the product into physical hazard classes.

9.2.2. Other safety characteristics: other safety characteristics: none indicated as relevant for the safe use of the mixture.

Section 10: Stability and reactivity

10.1. Reactivity: reacts with oxidizing agents. Do not mix with alkaline materials.

10.2. Chemical stability: stable under normal condition (usual temperature and pressure condition) if it is handled, stored according to user's instructions.

10.3. Possibility of hazardous reactions: no hazardous reaction known under conditions of normal use.

10.4. Condition to avoid: heat, high temperature, frost.

10.5. Incompatible materials: alkaline, oxidizing agents.

10.6. Hazardous decomposition products: no decomposition if used as directed.

Section 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Assessment is based on concentration and classification of components.

Acute toxicity (oral, dermal, inhalation): criteria for classification of the product into acute toxicity hazard classes are not met based on the composition.

Skin corrosion/irritation: classification criteria are met due to high iron (II) sulphate concentration. The product has to be classified into hazard class of Skin Irrit. 2

Serious eye damage/eye irritation: classification criteria are met due to high iron (II) sulphate content; the product has to be classified into hazard class of Eye Irrit. 2

Respiratory or skin sensitization: classification criteria are not met based on the composition.

Carcinogenicity: ingredients of the product are not classified as carcinogenic substances. No significant effects or critical hazard is known.

Germ-cell mutagenicity: ingredients are not classified as mutagenic substances.

Reproductive toxicity: as the mixture contains more than 0.3% boric acid, the product is classified as Repr. 1B, H360FD.

Specific Target Organ Toxicity single exposure/STOT SE: based on the available data and information on ingredients the classification criteria are not met.

Specific Target Organ Toxicity repeated exposure/STOT RE: based on the classification of ingredients the classification criteria are not met as concentration of manganese (II) sulphate hydrate is low.

Aspiration hazard: classification criteria are not met.

Section 12: Ecological information

12.1. Toxicity: no investigation was performed with this product. According to the calculation method given in Reg. (EC) No 1272/2008 the product has to be classified as hazardous mixture to the aquatic environment (Aquatic Chronic 3) due to its components having long-term aquatic hazard.

12.2. Persistence and degradability: not relevant for inorganics salts.

12.3. Bioaccumulative potential: not expected.

12.4. Mobility in soil: no data

12.5. Results of PBT- and vPvB-assessment: e components of the mixture are not identified PBT/vPvB substances.

12.6. Endocrine disrupting properties: components of the product are not listed in the available lists and databases of endocrine disruptors and suspected endocrine disruptors.

12.7. Other adverse effects: not known.

Section 13: Disposal considerations

13.1. Waste treatment methods: If it is possible avoid or at least minimize waste generation. Chemical and its waste and packaging must be disposed of in compliance with state and local regulations and Directive EC 2008/98.

Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

European Waste Catalogue waste codes are not specific for products, but for their uses.

Therefore, appropriate waste code should assign final user according to his specific use.

Recommended EWC code: 02 01 08*

Do not empty waste into drains, rivers, watercourses, ponds, standing waters, natural waterways.

Section 14: Transport information

According to the international transport (ADR/RID, IMDG and ICAO/IATA) regulations the product **is non-dangerous goods**.

14.1. UN-number: not applicable.

14.2. UN proper shipping name: not applicable.

14.3. Transport hazard class (es): not applicable.

14.4. Packaging group: not applicable.

14.6. Special precautions for users: not applicable.

14.7. Maritime transport in bulk according to IMO instruments: not applicable.

Section 15: Regulatory information

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

The product contains SVHC candidate substance (boric acid) greater than $\geq 0.1\%$.

Relevant European Acts

Regulation (EU) 2019/1009 laying down rules on the making available on the market of EU fertilising products

REACH and its modifications: Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EC) No 1272/2008 (CLP) and its modifications

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste and Repealing Certain Directives

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Lists of proposed occupational exposure limit values for the implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work in Directives 2000/39/EU, 2006/15/EU, 2009/161/EU, 2017/164/EU and 2019/1831/EU and Directive 2004/37/EC and its amendment; <https://echa.europa.eu/hu/cad-and-cmd-legislation>

15.2. Chemical Safety Assessment: has not been carried out.

Section 16: Other information

The information contained in the Safety Data Sheet is true and correct to our best knowledge at the date of issue; it is intended as a guide for safe use, handling, disposal, storage and transportation.

Manufacturer/Distributor does not assume any warranty or responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected to the handling, storage, use or disposal of the product because conditions of application, handling, storage, use or disposal of the product is beyond our control.

Classification of the product: the product is classified by calculations methods in accordance with the Reg (EC) No 1272/2008.

Training recommendation: In the annual occupational safety training workers should be informed about the hazards of handling chemicals and the general safety and health protection measures.

SAFETY DATA SHEET SHOULD ALWAYS BE AVAILABLE FOR WORKERS AT HAND.

Abbreviations: hazard classes (numbers after abbreviations mean the hazard category within the class, higher numbers mean less hazard): Acute Tox.: acute toxicity; Eye Irrit.: eye irritation, Eye Dam.: eye Damage; Skin Irrit.: skin irritation, STOT RE: Specific Target Organ Toxicity, repeated exposure; Repr: reproductive toxicity; Aquatic Acute: hazardous to the aquatic environment, acute hazard; Aquatic Chronic: hazardous to the aquatic environment, chronic hazard.

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H360FD	May damage fertility, may damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ÁK	average, allowable concentration of pollutants in the air, in a shift, which will not cause any adverse health effect
ATE	Acute Toxicity Estimate
CAS	Chemical Abstract Service, number for the identification of chemical substances.
CK	Allowable peak concentration: short-term allowable concentration of air pollutants in the air of the workplace
CLP	Classification, Labelling and Packaging
ECHA	European Chemical Agency
EDDHSA	ethylenediamine-N,N'-di[(2-hydroxy-5-sulfohenyl)acetic acid]
GESTIS	Information system on hazardous substances of the German Social Accident Insurance.
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization Technical Instruction for the Safe Transport of Dangerous Goods by Air
IMDG	International Maritime Dangerous Goods Code
M	multiplying factor, it is used to derive by summation method the classification of mixtures
M _(acute)	M-factor of aquatic acute toxicity
M _(chronic)	M-factor of aquatic chronic toxicity
PBT	Persistent, bio accumulative and toxic
ppm	parts per million by volume in air (ml/m ³)
RID	Accord Européen Relatif au Transport International des Marchandises Dangereuses par Route
STEL	Short Term Exposure Limit; a limit value above which exposure should not occur and which is related to a 15-minute period
SVHC	Substance of Very High Concern
TWA	measured/calculated in relation to a reference period of eight hours as a time-weighted average
vPvB	Very persistent and very bioaccumulative

History: Safety Data Sheet (2.0-EN) is issued on 14th Feb. 2024. It is based on the manufacturer's data, supersedes the previous version, the purpose of the modification is to comply with the Reg. (EU) No 2020/878.