

SAFETY DATA SHEET

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

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

- 1.1. Product identifier:** **Humic Quattro**
1.2. Relevant identified uses of the substance or mixture and uses advised against:

plant and soil conditioner
other than this

- Contraindicated use:**
1.3. Details of the supplier of the safety data sheet:

ALPHAVET Veterinary PLC

H-8000 Székesfehérvár, 7.

Phone: + 36 22 516 408 Fax: +36 22 516 416

www.alphavet.hu

Contact information for the person responsible for the safety data sheet: info@alpha-vet.hu

- 1.4. Emergency telephone number:** Health Toxicology Information Service (ETTSZ):

During the day (8 am – 4 pm): +36 1 476 6464

Toll-free number available 24/7: +36 80 20 11 99

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture:** manufacturer, relevant EU regulations Regulation (EC) No 1272/2008 (CLP ¹) and its amendments, **the product is a hazardous mixture.**

Classification:		Hazard class	Hazard category ²
Health hazard:	–	–	–
Environmental hazard:	Aquatic Chronic 3	Long-term aquatic toxicity hazard	3
Physical hazard:	–	–	–

2.2. Label elements

Pictogram: none, not required

Warning: none, not necessary

H-phrases indicating the hazards/risks of the mixture:

H412 Harmful to aquatic life with long lasting effects.

Precautionary P-phrases:

P102 KEEP OUT OF REACH OF CHILDREN.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

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 of contents/container to hazardous waste disposal site.

2.3. Other hazards

The product contains ≥ 0.1% of a substance proposed for the Candidate list of Substances of Very High Concern (boric acid), which is present in the product in the form of potassium borate, see section 3.

The SVHC list is available on the ECHA website: <https://echa.europa.eu/hu/candidate-list-table>

¹ **Classification , Labelling and Packaging** : Regulation (EC) No 1272/2008 and its amendments

²Higher number means lower risk

SECTION 3: Composition/information on ingredients

3.1. Substances: not relevant

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

Ingredients:

Potassium humate (humic acid potassium salt: CAS number: 68514-28-3 EC number: 271-030-1),

Plant amino acids in hydrolyzed form,

Copper(II), manganese(II), zinc(II) and iron(III) ions in the form of their sulfate salts or EDDHSA (CAS number: 57368-07-7) chelate complexes,

Boric acid, in the form of borate salt (boron content: 0.1%; equivalent to 0.6% boric acid).

According to Regulation (EU) 2015/830, the ingredients of the product that must be declared are:

Hazardous ingredient	Concentration	Hazard class, category, H-phrase
Copper(II) sulfate pentahydrate* CAS number: 7758-99-8 EC number: 231-847-6 Index number: 029-023-00-0	0.3 – <0.4%	Acute Tox. (oral) 4, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400, M _(acute) : 10; Aquatic Chronic 1, H410, M _(chronic) : 1
Manganese(II) sulfate hydrate* CAS number: 10034-96-5 EC number: 232-089-9 Index number: 025-003-00-4	0.25 – <0.3%	STOT RE 2, H373; Aquatic Chronic 2, H411
Zinc(II) sulfate (mono-, hexa- and heptahydrate) CAS number: 7446-19-7 EC number: 231-793-3 Index number: 030-006-00-9	0.25 – <0.3%	Acute Tox. (oral) 4, H302; Eye Dam. 1, H318; Aquatic Acute 1, H400, M _(acute) : 1; Aquatic Chronic 1, H410, M _(chronic) : 1
Boric acid** CAS number: 10043-35-3 EC number: 233-139-2 Index number: 005-007-00-2	0.6%	Repr. 1B, H360FD, special concentration limit: ≥ 5.5%

* substance with a workplace exposure limit value established in Hungarian regulations and EU legislation, see section 8

** boric acid in the product forms a salt during pH adjustment with potassium hydroxide solution, it is present in the form of borate salt (potassium borate); its amount is equivalent to 0.6% boric acid and 0.1% boron (atomic weight of boron: 10.81 g, molar weight of boric acid: 61.83 g)

The other components of the preparation are not considered hazardous substances according to the applicable legislation, or their concentration in the preparation does not reach the level above which their presence must be indicated or taken into account in the classification according to hazard.

The hazard classes and categories apply to the pure substance, the hazard classification of the product is given in Section 2. For the full text of the H-phrases, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures: the professionalism and speed of first aid can greatly reduce the development and severity of symptoms.

In case of inhalation: if the product spray is inhaled, move the injured person to fresh air; in case of persistent complaints, consult a doctor.

In case of skin contact: wash the skin surface contaminated with the product with plenty of water. In case of persistent complaints or irritation, consult a doctor.

In case of eye contact: Rinse the eyes thoroughly with running water for at least 5 to 10 minutes, while holding the eyelids apart and constantly moving the eyeball. If the complaint persists, consult a specialist.

If swallowed: Rinse your mouth with water and drink 1-2 glasses of water.

Go to a doctor, show the product label or safety data sheet!

4.2. Most important symptoms and effects, both acute and delayed: eye irritation may occur in case of prolonged or repeated exposure. May irritate mucous membranes and the digestive system if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed: If symptoms of poisoning occur or are suspected, seek medical advice immediately and show the product label or safety data sheet. **Note to physician:** There is no specific antidote. Treat symptomatically and with supportive therapy.

SECTION 5: Firefighting measures

5.1. Extinguishing media: water jet, foam, carbon dioxide, powder. It is advisable to determine based on the burning materials and conditions in the environment.

Unsuitable extinguishing media: none known

5.2. Special hazards arising from the substance or mixture: at high temperatures, combustion and decomposition products may contain hazardous gases/vapours/fumes; sulfur oxides, carbon oxides, etc. are formed.

5.3. Advice for firefighters: full protective equipment and self-contained breathing apparatus

5.4. Other information: the product is not a flammable mixture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid exposure to the product, use protective equipment when collecting large spills, see section 8. Clean-up should be carried out by experienced, trained personnel wearing appropriate protective equipment.

6.2. Environmental precautions

Stop the leak. Prevent the spilled product from spreading. Prevent the spilled product from entering the soil, surface and groundwater, sewers, cellars. Dispose of in accordance with local regulations. Avoid accidental release of the product into the environment.

6.3. Methods and material for containment and cleaning up

In case of large quantities, use a pump to collect the spilled material, cover the residue with an inert, liquid-absorbing material (e.g. sand, vermiculite, earth, sawdust), soak it up and collect it. The collected waste is stored in a suitable, labelled, lockable waste container until disposal. The residue must be rinsed with water. Be careful of the risk of slipping!

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling: Care should be taken to avoid exposure to the product: eye contact, skin contact, inhalation of spray.

Do not eat, drink or smoke while working. After finishing work, wash your hands thoroughly and, if possible, take a shower.

Information regarding fire and explosion hazards: no special measures required.

7.2. Conditions for safe storage, including any incompatibilities

Store the product in its original container, tightly closed, labeled, in a frost-free, cool place, protected from sunlight. Keep out of the reach of children!

Keep away from food, drink and animal feeding stuffs and incompatible materials! Incompatible materials: acids, oxidizing agents. Storage temperature: between 5 – 35°C.

7.3. Specific end use: plant and soil conditioning product

Users should always read the user manual and follow the regulations and instructions for safe handling and use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit value

permissible limit value in the workplace air is According to Decree No. 25/2000 (IX.30.) of the Ministry of Education and Science:

Copper and its compounds (calculated as elemental copper): TWA ³: 1 mg/m³, TWA ⁴: 4 mg/m³

³AO: Average concentration: the average concentration of a substance in the air of the workplace allowed for one shift, which does not have a harmful effect on the health of the worker.

⁴CK: Peak concentration : the highest air pollution level that can be allowed for a short period of time within a shift.

Manganese and its inorganic salts (calculated as elemental manganese, except Mn_3O_4): TWA: 5 mg/m³, TWA: 20 mg/m³

Annual biological monitoring of manganese exposure is required, see Decree 33/1998. (VI.4.) of the Ministry of Agriculture.

Other limits:

boric acid⁵: 0.5 mg/m³ (8-hour work); permissible peak concentration (15 minutes): 1 mg/m³; 10 mg/m³ – respirable fraction in the form of aerosol;
TWA⁶: 2 mg/m³, STEL⁷: 6 mg/m³ – ACGIH⁸2008

According to Section 7 (6) of the Joint Decree of the Ministry of Health and Social Affairs and the Ministry of Labour and Social Affairs on Chemical Safety at the Workplace 25/2000 (IX.30.) , the employer is obliged to reduce the exposure to a hazardous substance not regulated by a limit value to the lowest level that can be expected according to the scientific and technical standard, at which level, according to the current state of science, the hazardous substance has no harmful effects on health.

8.2. Exposure controls

Care must be taken to prevent the product from getting on the skin and in the eyes, and inhalation of its spray.

Technical measures: providing safety equipment.

Hygiene measures:

- Do not eat, drink or smoke during use!
- Thorough hand washing is required after use and before breaks.
- Thorough cleaning is recommended upon completion of work.

Personal protective equipment:

- **Airway protection:** not necessary.
- **Hand protection:** Protective gloves are required for prolonged and repeated contact. Use chemical-resistant protective gloves that comply with EN 374. When selecting protective gloves, it is worth considering the duration of use, frequency of use, and the possibility of contact with other chemicals. Check and replace worn or damaged protective gloves.
- **Eye protection:** safety glasses are required if there is a risk of splashing in the eyes, when handling large quantities, when transferring or discharging.
- **Body protection:** Body surface protection should be selected depending on the activity and possible exposure (workwear, protective clothing).

The above regulations apply to work carried out professionally under average conditions. If the work is carried out under different conditions or extraordinary circumstances, it is advisable to decide on risk reduction measures with the involvement of an expert.

Environmental precautions: no special instructions are required, avoid accidental release of the product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Appearance:	liquid
Color:	brownish
Odor:	not characteristic
Odour threshold:	not relevant
pH value at 20°C:	8.7 – 9.3
Melting point:	no data
Boiling point:	approx. 100°C
Flash point:	no data available, not typical, aqueous solution
Evaporation rate:	no data

⁵German limit value: http://limitvalue.ifa.dguv.de/WebForm_gw2.aspx (GESTIS)

⁶TWA (Time Weighted Average): Average concentration for an 8-hour work period.

⁷STEL (Short Term Exposure Limit): concentration for a short period of time (15 minutes) to which exposure is permissible.

⁸American Conference of Governmental Industrial Hygienists

Flammability (gas, solid):	not relevant
Explosion limits:	no data, not relevant
Vapor pressure:	n inches data
Vapor density:	no data
Density:	>1 g/ cm ³
Water solubility:	freely miscible
Partition coefficient:	no data
Autoignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity:	no data
Explosion hazard:	not typical, no explosion hazard
Oxidizing properties:	not typical, not oxidizing

9.2. Other information: not available

SECTION 10: Stability and reactivity

10.1. Reactivity: the product is not reactive.

10.2. Chemical stability: stable when used and stored as directed under normal temperature and pressure conditions.

10.3 Possibility of hazardous reactions: none known.

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

10.5. Incompatible materials: the product is incompatible with strong acids and oxidizing agents.

10.6. Hazardous decomposition products: none known when used as intended.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008: no specific toxicological studies have been conducted with the preparation, its assessment was made solely on the basis of toxicological data on the components, their classification and concentration.

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

Skin corrosion/irritation: Based on the composition, the criteria for classification in this hazard class are not met for the product, the product does not irritate the skin.

Serious eye damage/eye irritation: based on the composition, the criteria for classification in this hazard class are not met for the product, the product is not an eye irritant.

Skin and respiratory sensitization: the classification criteria are not met based on the composition.

Carcinogenicity: the components of the product are not classified as carcinogenic.

Germ cell mutagenicity: the components of the product are not classified as mutagenic substances.

Reproductive toxicity: significant effect, critical hazard not known, classification criteria not met, as the borate concentration, or the value converted to boric acid in the product, is far below the specific concentration limit for reproductive toxicity established for boric acid (5.5%).

Specific target organ toxicity, single, repeated exposure/STOT SE and STOT RE: based on available information, the classification criteria are not met.

Aspiration toxicity: no significant effects, no critical hazards known. Based on available data, the classification criteria are not met.

Likely routes of exposure: eye contact, skin contact, inhalation of spray.

Delayed and immediate effects and chronic effects from short and long term exposure: may irritate the eyes after prolonged exposure to large amounts.

Other information: If used as directed and intended, based on the information and experience available to them, there is no risk of any harmful effects on health.

11.2. Information on other hazards: not available

SECTION 12: Ecological information

12.1. Toxicity: the concentration of the components of the preparation that pose an acute and chronic hazard to the aquatic environment, taking into account the M-factor, based on Table 4.1.2 of the CLP Regulation, the product poses a long-term aquatic toxicity hazard: Aquatic Chronic 3, i.e. harmful to aquatic life, causing long-term damage.

12.2. Persistence and degradability: not relevant for inorganic salts, good biodegradability is likely for other components.

12.3. Bioaccumulative potential: not likely.

12.4. Mobility in soil: no data.

12.5. Results of PBT and vPvB assessment: no data.

12.6. Endocrine disrupting properties: no data.

12.7. Other undesirable effects: no data.

SECTION 13: Disposal considerations

13.1. Waste treatment methods: If possible, we avoid it, but at least minimize waste generation.

The disposal of the product and its solutions, waste and residues is governed by Government Decree 225/2015 (VIII.7.).

Waste classification should be carried out in accordance with Decree 72/2013. (VIII.27.) of the Ministry of Finance.

It is forbidden to discharge waste from the product into public sewers or waterways.

Non-contaminated, completely emptied and cleaned packaging material with water can be recycled.

The management of packaging waste of the product is regulated by Government Decree 442/2012 (XII. 29.).

SECTION 14: Transport information

The preparation **is not a dangerous good according to the conventions regulating the international transport of dangerous goods (ADR/RID, IMDG, IATA/ICAO).**

14.1. UN number or ID number: not relevant

14.2. UN proper shipping name: not relevant

14.3. Transport hazard class(es): not relevant

14.4. Packing group: not relevant

14.5. Environmental hazard: not relevant

14.6. Special precautions for user: not relevant

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:

Regulation (EC) No 2003/2003 on fertilizers

REACH Regulation: 1907/2006/EC and its amendments

CLP Regulation (EC 1272/2008) and its amendments: 1. ATP: Regulation (EC) No 790/2009; 2. ATP: Regulation (EC) No 286/2011; 3. ATP: Regulation (EU) No 618/2012; 4. ATP: Regulation (EU) No 487/2013; 5. ATP: Regulation (EU) No 944/2013; 6. ATP: Regulation (EU) No 605/2014; 7. ATP: Regulation (EU) No 2015/1221; 8. ATP: Regulation (EU) No 2016/918; 9. ATP: Regulation (EU) No 2016/1179; 10. ATP: Regulation (EU) No 2017/776

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

Directive 2000/39/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives

Relevant Hungarian legal documents

- 36/2006. (V.18.) of the Ministry of Agriculture and Rural Development on the licensing, storage, distribution and use of crop-enhancing substances and amendments to the decree;
- 37/2006 (V.18.) of the Ministry of Agriculture and Rural Development on the placing on the market and control of fertilizers designated as EC fertilizers;
- Occupational safety: Act XCIII of 1993 on occupational safety; Joint Decree 25/2000 (IX.30.) of the Ministry of Health and Social Affairs and the Ministry of Labour on chemical safety at workplaces; Joint Decree 33/1998 (VI.24.) of the Ministry of Labour and Social Affairs on medical examination and opinion on occupational, professional and personal hygiene suitability; Joint Decree 3/2002 (II.8.) of the Ministry of Health and Social Affairs and the Ministry of Labour and Social Affairs on the minimum level of occupational safety requirements at workplaces;
- Chemical safety: Act XXV of 2000 on chemical safety and its amendments, Decree 44/2000. (XII.27.) of the Ministry of Health and Welfare on the detailed rules of certain procedures and activities related to hazardous substances and hazardous preparations and its amendments;
- Environmental protection: Act LIII of 1995 on general rules for environmental protection; Act CLXXXV of 2012 on waste; Government Decree 225/2015 (VIII.7.) on detailed rules for certain activities related to hazardous waste; Decree 72/2013 (VIII.27.) on the waste list;
- Fire protection: Act XXXI of 1996 on fire protection, technical rescue and the fire brigade; Decree 54/2014. (XII.5.) of the Ministry of the Interior on the National Fire Protection Regulations.

15.2. Chemical safety assessment: not carried out.

SECTION 16: Other information

The information, data and recommendations contained in this safety data sheet are based on the best of our knowledge and information, and are believed to be accurate and correct at the time of publication, and are intended to assist in the safe handling and use of the product.

Since we have no influence on all factors affecting the safe use of the product, the database does not constitute the basis for any direct or indirect legal obligation or liability for consequences, damage or loss arising from its improper use, storage, handling or disposal.

Recommendation for training: Persons working professionally with the product must be informed about the dangers of working with chemicals and the general occupational health and safety regulations in the framework of annual repeated occupational health and safety training. Appropriate training for employees, which serves to ensure the protection of human health and the environment:

Before using or storing the product, workers must be informed about the safe handling of chemicals through occupational safety training. THE SAFETY DATA SHEET SHOULD ALWAYS BE AVAILABLE TO WORKERS.

Product classification: calculated, see sections 11 and 12.

Abbreviations and H-phrases in sections 2 and 3:

- M: multiplication factor to be applied when determining acute and chronic aquatic environmental hazard using the weighted summation method
M_(acute): M-factor for acute aquatic toxicity
M_(chronic): M-factor for chronic aquatic toxicity
PBT persistent, bioaccumulative, toxic
vPvB very persistent, very bioaccumulative

EDDHSA: Ethylenediamine-N,N'-di[(2-hydroxy-5-sulfophenyl)acetic acid] and its condensation products

Abbreviations of hazard classes, the numbers after the abbreviations (1 – 4) indicate the category within the class, higher numbers indicate a lower hazard:

Acute Tox.: acute toxicity; oral: by mouth; Eye Dam.: serious eye damage; STOT RE: specific target organ toxicity, repeated exposure; Repr.: reproductive toxicity; Aquatic Acute: hazardous to aquatic life, acute hazard; Aquatic Chronic: hazardous to aquatic life, chronic hazard.

- H302 Harmful if swallowed.
H318 Causes serious eye damage.
H360FD May damage fertility or the unborn child.

H373	May cause damage to organs through repeated or prolonged 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.

Data sheet history: based on the manufacturer's data, the product's safety data sheet version 1.0-HU was prepared on December 17, 2017, which was amended on May 17, 2018. Version number of this data sheet: 1.1-HU, supersedes the previous version, reason for amendment: change in P-phrases.