



PRODUCT SAFETY DATA SHEET

(according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008)

HUMAC® Agro

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier:

Name: HUMAC® Agro

Description: Natural soil fertility stimulator without chemical additives, soil adjuvant.

Product code:

Packaging	Code
1000 kg	600
500 kg	601
25 kg	602
10 kg	603
5 kg	604

The product is subject to certification under Act no. 136/2000 of the Codex (Z.z.) on fertilizers, as amended by Act No. 555/2004 of the Codex (Z.z.).

Code number according to customs tariff: 310100

Item title: Animal or vegetable fertilizers

Serial No.	Verified property	Required scope of verification	Evaluation
1	Content of humic acids in dry matter in %	min. 62,0	Complied
2	Humidity in %	max. 20,0	Complied
3	Content of cadmium in mg.kg ⁻¹ in dry matter	max. 2	Complied
4	Content of arsenic in mg.kg ⁻¹ in dry matter	max. 10	Complied
5	Content of mercury in mg.kg ⁻¹ in dry matter	max. 1	Complied
6	Content of chrome in mg.kg ⁻¹ in dry matter	max. 100	Complied
7	Content of nickel in mg.kg ⁻¹ in dry matter	max. 50	Complied
8	Content of lead in mg.kg ⁻¹ in dry matter	max. 50	Complied

1.2 Relevant identified uses of the substance / mixture

HUMAC® Agro is a natural soil fertility stimulator with high content of natural humic acids intended for application on soil according to the dosage and application method indicated on the label.

Uses advised against: Data not available.

1.3 Details of the supplier of the safety data sheet

HUMAC s.r.o.

Werferova 1, 040 11 Košice, Slovakia

+421 (0) 918 565 186

humac@humac.sk

1.4 Emergency telephone number: +421 (0) 918 565 186

Hours of operation: Mon - Fri 8.00 - 17.00



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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance / mixture (according to the Regulation (EC) No 1272/2008). The product is not classified according to the CLP regulation.

DSD/DPD

Hazard indication: The product is not classified as hazardous. R-phrases: None.

2.2 Label elements (according to the Regulation (EC) No 1272/2008) Hazardous components that must be listed on the etiquette: None.

2.3 Other hazards

Avoid breathing dust and contact with eyes.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Component name	Description
Activated Leonardite	Natural substance with high content of humic acids, 100% natural substance, activation without chemical additives.
Agriculture-grade super absorbent polymer	potassium polyacrylate based super absorbent polymer – agriculture grade

4. FIRST AID MEASURES

4.1 Description of first aid measures

General notes

No personal protective equipment is needed for first aid responders.

Following inhalation

Move the person to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops or if discomfort, coughing or other symptoms persist.

Following contact with eyes

Rinse with water, forcing the eyelids open for a min. of 10 - 15 minutes. Remove contact lenses first if any.

Following contact with skin

Is not dangerous, just rinse with water.

4.2 Most important symptoms and effects, both acute and delayed

The substance has no negative effects on people, animals nor the environment. **If inhaled:** May cause irritation and coughing. Is not dangerous.

If ingested: Is not toxic.

4.3 Indication of any immediate medical attention and special treatment needed

At the occurrence of health problems or in case of doubts consult a doctor and provide him with data from this product safety data sheet.



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5. FIREFIGHTING MEASURES

5.1 Extinguishing media

5.1.1 Suitable extinguishers

It is recommended to extinguish with water, sand or clay.

5.1.2 Unsuitable extinguishers (which must not be used for safety reasons) Pressure fire extinguishers of all types, except for water pressure extinguishers.

5.2 Special hazards arising from the substance or mixture

Slightly combustible material, has properties similar to coal when burning. Combustion emits carbon dioxide (CO₂).

5.3 Advice for fire-fighters

Do not enter the fire area without adequate protective clothing and a gas mask. In combustion emits CO₂.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes. Wear protective gloves, glasses and respirator. The material does not evaporate, but produces dust during handling.

6.2 Environmental precautions

Not necessary.

6.3 Methods and material for containment and cleaning up

The spilled material is cleaned by mechanical means, then cleaned with water with added detergent /pH 7 - 8/. Ensure that the workers wear appropriate personal protective equipment and prevent dust from spreading. Avoid inhalation of dust during handling and cleaning.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protective measures

Wear protective equipment, mainly glasses for eye protection and a respirator. Avoid inhalation and contact with eyes. Follow the instructions for personal precaution and work safety. Do not drink, eat or smoke during work. After work and before eating wash your hands with soap and water and treat with reparation cream.

Measures to prevent fire

Protect against open flame.

Measures to prevent aerosol and dust generation

Keep the packaging closed after handling.

Measure to protect the environment

Not necessary.



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7.1.2 Information on general occupational hygiene

In dusty environment, wear dust mask and protective goggles.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original packages on dry, covered and ventilated areas. Prevent from contact with oxidizing agents, direct sunlight and sources of heat. Store at temperature ranging from -10°C to +40°C. Keep away from children.

Recommended packaging materials: high density polyethylene.

Unsuitable packaging materials: textile bags.

7.3 Specific end use(s)

No additional information for the specific end uses.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Undetermined.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Measures to reduce generation of dust and to avoid dust propagating in the environment such as dedusting, exhaust ventilation and dry clean-up methods which do not cause airborne dispersion.

8.2.2 Individual protection measures such as personal protection equipment

General: Do not eat, drink or smoke when working with HUMAC® Agro to avoid contact with skin or mouth. After working with HUMAC® Agro, workers should wash or shower or use skin moisturisers.

Eye /face protection



Wear protective glasses or safety goggles when handling to prevent contact with eyes.

Respiratory protection



When a person is potentially exposed to dust levels above exposure limits, use appropriate respiratory protection.

Thermal hazards

Not applicable.

8.2.3 Environmental exposure controls

Environmental exposure control is not necessary. No special emission control measures are necessary for the exposure to the terrestrial environment.



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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- (a) Appearance: black and brownish powder or granules (b) Odour: natural, neutral odour
- (c) Odour treshold: no odour threshold
- (d) pH (at 20°C): 6,5
- (e) Melting point: n/a
- (f) Initial boiling point and boiling range: Not applicable
- (g) Flash point (FIT): (535 ± 17) °C
- (h) Ignition point (SIT): (500 ± 10) °C
- (i) Evaporationrate:Notapplicableasisnotaliquid
- (j) Flammability(solid,gas):slightlycombustilematerial
- (k) Upper/lower flammability or explosive limits: Not applicable as is not a flammable gas (l) Vapourpressure(at20°C):n/a
- (m)Vapour density (at 20°C): n/a
- (n) Relative density (at 20°C): 1.25 g/cm³; Apparent density (at 20°C): 1.25 g/cm³
- (o) Solubility:
 - inwater:insoluble,formsturbidity - inalkalides:soluble
 - inalcohol:partiallysoluble
- (p) Partition coefficient: n-octanol/water: Data not available.
- (q) Auto-ignition temperature: Not applicable as does not auto-ignite in the original packaging
- (r) Decomposition temperature: >100°C
- (s) Viscosity: Not applicable as not a liquid
- (t) Explosive properties: Can be explosive only if mixed with another substance containing nitrogen
- (u) Oxidising properties: Not applicable as does not have oxidising properties

10. STABILITY AND REACTIVITY

10.1 Reactivity

Data not available.

10.2 Chemical stability

When storage and handling instructions are met, the product is stable up to 80°C.

10.3 Possibility of hazardous reactions

Data not available.

10.4 Conditions to avoid

Conditions other than stated under storage and handling conditions.

Humid conditions during storage may cause lump formation and loss of product quality.

10.5 Incompatible materials

Strong oxidizing agents, substances containing more than 15% nitrogen, metal powders.

10.6 Hazardous decomposition products

None at standard storage conditions. Combustion generates CO₂.



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11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Based on available data, the classification criteria for any toxicological effects are not met.

Acute toxicity:

LD50 / rats / orally (mg/kg of live weight): 10480 - very low to no toxicity. LD50 / rats / dermally (mg/kg): Data not available.

LD50 / rats / inhaling / aerosoles (mg/dm³): Data not available.

LD50 / rats / inhaling / gases and vapors (mg/dm³): Data not available.

Irritation: No irritant reactions on skin are known.

Sensitization: Data not available.

Toxicity of the repeated dose: None, is for a long term and preventive use in order to eliminate toxicity. There is no danger to the living organisms at the correct dosing, the contact toxicity is zero.

Carcinogenicity: Not carcinogenic.

Reproductive toxicity: None.

Experiences from effects on humans: Belongs to natural remedies.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

The product is not hazardous to the environment.

12.2 Persistence and degradability

Not easily decomposable.

12.3 Bioaccumulative potential

Data not available.

12.4 Mobility in soil

Bioactive soil component - forms a bioactive component of humus in the soil.

12.5 Results of PBT and vPvB assessment

Data not available.

12.6 Other adverse effects

Data not available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

No special measures required as it is an organic compound.

14. TRANSPORT INFORMATION

HUMAC® Agro is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID); no classification is required.

No special precautions are needed apart from those mentioned under Section 8.



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14.1 UN number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This Product safety data sheet was created in accordance with the EU Parliament and Council (EC) Regulation No. 1907/2006 (REACH) concerning registration, authorisation assessment and restriction of chemicals, as amended; CLP Regulation (EC) No. 1272/2008 on classification, labeling and packaging of substances and mixtures, as amended; Act No. 67/2010 of the Codex (Z.z.) from February 2, 2010 on the conditions for placing chemical substances and mixtures, and on amending and supplementing certain acts (Chemical Act); Act of the National Council of the Slovak Republic No. 124/2006 of the Codex (Z.z.) from February 2, 2006 on safety and health protection at work; Act No. 223/2001 of the Codex (Z.z.) from May 15, 2001 on waste and on amending and supplementing certain acts; Decree of Ministry of Environment of the Slovak Republic No. 284/2001 of the Codex (Z.z.) from June 11, 2001 on the Waste catalogue; Government regulation No. 355/2006 from May 10, 2006 on the protection of workers from risks related with exposure to chemical factors at work, as amended.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

16. OTHER INFORMATION**16.1 Training advice**

Familiarize the staff with suitable method of use, mandatory protective equipment, first aid and the prohibited handling and storage of the substance/preparation.



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16.2 Disclaimer

The data provided is based on our current state of knowledge and understanding and is not a guarantee of the product properties. It in no way exempts the user from the need to know the laws within the field of his/her activity.

The user solely is responsible for ensuring the adherence of safety measures when using the product. All measures are intended to be helpful for the consumer under the above stated conditions. They constitute health and safety recommendations regarding the environment and are necessary for safe use, but can not be considered a guarantee of performance characteristics or suitability for a particular use. It is the responsibility of the user (employer) to ensure that the work was planned and carried out in accordance with applicable valid regulations.

This document is not prepared for the purpose of certifying quality.

16.3 Key sources of data

The product safety data sheet has been prepared based on our best knowledge on current legislations and the data taken from the manufacturer's product safety data sheet.

Approved by: Ing. Gejza Szanyi, Executive manager