

Bioethanol 43%, Ethanol 43%

Date of issue: 7.9.2018 Version: 1

1**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Trade name: Bioethanol 43%, Ethanol 43%****1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier:

PH. Agrohóm., Agrohómeopatija za rastline in škodljivce, Ing. Majda Ortan, s.p.

Address: Ob Meži 30, 2391 Prevalje

Telephone No: 00386 (0)70 815 279

E-mail: ortan.m@gmail.com

1.4 Emergency telephone numberIN Slovenia: Tel. Nr. 112 : Emergency call 112 - Administration of the Republic of Slovenia
for Protection and RescueAbroad: Emergency call on telephone number of State Administration for Protection and
Rescue

In EU countries:

| STATE | | Call number | Call number | Call number |
|----------------|-----------------|-------------|--------------|-------------|
| | | POLICE | FIREFIGHTERS | RESCUERS |
| AUSTRIA | AVSTRIJA | 133 | 122 | 144 |
| BELGIUM | BELGIJA | 101 | 100 | 100 |
| CZECH REPUBLIC | ČEŠKA REPUBLIKA | 158 | 150 | 155 |
| DENMARK | DANSKA | 11 | 112 | 112 |
| FINLAND | FINSKA | 10022 | 112 | 112 |
| FRANCE | FRANCIJA | 17 | 18 | 15 |
| GREECE | GRČIJA | 100 | 199 | 166 |
| ITALY | ITALIJA | 112 | 115 | 118 |
| ICELAND | ISLANDIJA | 112 | 112 | 112 |
| ITALY | ITALIJA | 112 | 115 | 118 |

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| | | | | |
|---------------------|------------------|---------|---------|---------|
| LIECHTENSTEIN | LIECHTENSTEIN | 112 | 112 | 112 |
| LUXEMBOURG | LUKSEMBURG | 112,113 | 112,113 | 112,113 |
| HUNGARY | MADŽARSKA | 07 | 05 | 04 |
| GERMANY | NEMČIJA | 110 | 112 | 112 |
| NETHERLANDS | NIZOZEMSKA | 112 | 112 | 112 |
| NORWAY | NORVEŠKA | 112 | 110 | 113 |
| POLAND | POLJSKA | 997 | 998 | 999 |
| PORTUGAL | PORTUGALSKA | 112 | 112 | 112 |
| REPUBLIC OF IRELAND | REPUBLIKA IRSKA | 999 | 999 | 999 |
| SLOVENIA | SLOVENIJA | 113 | 112 | 112 |
| SWEDEN | ŠVEDSKA | 90000 | 112 | 112 |
| SWITZERLAND | ŠVICA | 117 | 144 | 144 |
| SPAIN | ŠPANIJA | 091 | 080 | 061 |
| TURKEY | TURČIJA | 155 | 110 | 112 |
| UNITED KINGDOM | VELIKA BRITANIJA | 999 | 999 | 999 |

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

- Classification according to Regulation (EC) No 1272/2008
Flam. Liq. 3 :Flammable liquid and vapour.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
- The product is classified and labelled according to the CLP regulation.
- Hazard pictograms:



GHS02

- Signal word: Warning

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- Hazard statements
H226 Flammable liquid and vapour.
- Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P240 Ground/bond container and receiving equipment.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

- Dangerous components:

| | | | |
|---|---------|---|---------|
| CAS: 64-17-5 EG Nr.: 200-578-6 Reg.nr.: 01-2119457610-43-XXXX | ethanol | Flam. Liq. 2, H225; Eye Irrit. 2, H319 | 43% w/w |
|---|---------|---|---------|

- Additional information:
Ethanol is dissolved in purified water Aqua purificata (sterilized water, Pharmacopeia quality).

For the wording of the listed risk phrases refer to section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice: Instantly remove any clothing soiled by the product.
- After inhalation:
Provide fresh-air circulation. If symptoms continue, consult a doctor. In case of respiratory failure or breathing irregularities, commence resuscitation or oxygen inhalation and immediately consult a doctor. In case of unconsciousness, place and transport the patient in a recovery position.
- After skin contact:
Remove contaminated clothing immediately. Wash affected areas with plenty of water und soap. If irritation continues, contact a doctor.
- After eye contact:
Rinse immediately opened eye for several minutes under running water. Then consult doctor.
- After swallowing:
Rinse out mouth with water.
Do not induce vomiting; instantly call for medical help.

4.2 Most important symptoms and effects, both acute and delayed

Dizziness, double vision and other typical symptoms of alcoholic intoxication.
Vomiting, unconsciousness. Irritation of skin, eyes and airways.

- Information for doctor:
Symptomatic treatment (decontamination, vital functions), no specific antidote known.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing agents
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- For safety reasons unsuitable extinguishing agents
Water with a full water jet.

5.2 Special hazards arising from the substance or mixture

Can form explosive gas-air mixtures. In case of incomplete combustion carbon monoxide can arise. Fumes are heavier than air and distributed over ground.
Inflammation is possible from a far distance.

5.3 Advice for firefighters

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- Protective equipment:
Wear full protective suit with self-contained breathing apparatus.
- Additional information
Endangered containers in the surrounding area should be cooled with a water-hose.
Damp down explosive gas-air mixtures with water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment and keep unprotected persons away.

Extinguish naked flames. Remove flammable sources. No smoking. Avoid sparks.
Avoid contact with skin, eye

6.2 Environmental precautions

Prevent material from reaching sewage system, holes and cellars.

If large amounts are released, the authorities must be informed.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Dispose of contaminated material as waste according to item 13.

6.4 Reference to other sections

Danger of explosion

See Section 7 for information on safe handling

See Section 13 for information on disposal.

See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep containers tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with eyes or skin.

- Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

- Storage:

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Protect against direct sunlight, other sources of heat and ignition.

Keep containers tightly closed. Store in cool, dry conditions.

- Requirements to be met by storerooms and containers:

Observe official regulations on storage and handling of water hazardous substances

Store in cool location.

- Information about storage in one common storage facility:

Pay attention to regulations / technical guidelines on mixed storage of flammable liquids.

- Further information about storage conditions:

Unsuitable material for containers and conduits: aluminum and their alloys.

Provide earthing of containers, equipment, pumps and ventilation facilities.

- Storage class 3 (VCI - Konzept, 2007)

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Additional information about design of technical systems:

Room ventilation i.e. vacuum suction. Measures to be taken against electro-static sparks.

- Components with critical values that require monitoring at the workplace:

| | |
|------------------------------|---|
| 64-17-5 ethanol (50-100%) | WEL: Long-term value: 1920 mg/m ³ , 1000 ppm |
|------------------------------|---|

| DNEL-Werte: 64-17-5 Ethanol | | |
|-----------------------------|-------------------|--|
| Oral | DNEL (population) | 87 mg/kg bw/day (Long-term - systemic effects) |
| Dermal | DNEL (population) | 206 mg/kg bw/day (Long-term - systemic effects) |
| | DNEL (worker) | 343 mg/kg bw/day (Long-term - systemic effects) |
| Inhalative | DNEL (population) | 950 mg/m ³ (Acute - local effects) |
| | | 114 mg/m ³ (Long-term - systemic effects) |
| | DNEL (worker) | 1900 mg/m ³ (Acute - local effects) |
| | | 950 mg/m ³ (Long-term - systemic effects) |

| PNEC-Werte: 64-17-5 ethanol | |
|-----------------------------|-----------------------------------|
| PNEC | 0.63 mg/kg dw (soil) |
| | 580 mg/l (sewage treatment plant) |
| PNEC aqua | 0.96 mg/l (fresh water) |
| | 0.79 mg/l (marine water) |

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| | |
|---------------|---|
| PNEC sediment | 3.6 mg/kg dw (fresh water) 2.9 mg/kg dw (marine water) |
|---------------|---|

- Additional information:
The lists that were valid during the compilation were used as basis.

8.2 Exposure controls

- Personal protective equipment
- General protective and hygienic measures
Keep away from food, beverages and fodder.
Wash hands during breaks and at the end of the work.
Instantly remove any soiled and impregnated garments.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
- Breathing equipment:
Not necessary if room is well-ventilated.
Use breathing protection in case of insufficient ventilation.
- Recommended filter device for short term use:
Combination filter A-P2
Take care of limitations and rules for the use of breathing protection equipment (BGR 190).
- Protection of hands: Protective gloves (EN 374).
Check protective gloves prior to each use for their proper condition.
- Material of gloves
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.5 mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- Penetration time of glove material
Change gloves if notice sign of disenchantment.
Material of gloves is recommended for a short-term single use to protect from splashes. For permanent usage contact manufacturer of gloves.
- Eye protection:
Tightly sealed safety glasses (EN 166).

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- Body protection: Protective work clothing (SIST EN 340).

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

- General Information:

| | |
|--|---|
| Appearance: | <ul style="list-style-type: none"> • Physical state: Fluid • Colour: Colourless |
| Odour: | alcoholic |
| Odour threshold: | Not determined |
| pH-value (100 g/l) at 20 °C: | Not determined |
| Melting point/freezing point: | Not determined |
| Initial boiling point and boiling range: | Not determined |
| Flash point: | 24 °C (DIN 51755) |
| Evaporation rate: | Not determined |
| Flammability (solid, gas): | 425 °C (DIN 51794) for ethanol |
| Upper/lower explosive limits: | Not determined |
| Vapour pressure at 20 °C: | Not determined |
| Vapour density: | Not determined |
| Density at 20 °C: | ca. 0,929 g/cm ³ |
| Solubility in / Miscibility with Water: | Fully miscible |
| Partition coefficient: n-octanol/water: | Not determined |
| Auto-ignition temperature: | Product is not selfigniting. |
| Decomposition temperature: | Not determined |
| Viscosity dynamic at 20 °C: | Not determined |
| Explosive properties | Danger of explosion: Product is not explosive. However, formation of explosive air/steam mixtures is possible. |
| Oxidising properties | Not determined |

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9.2 Other information

Evaporation number (ethanol): 8,0 (Ether = 1) (DIN 53170)

Evaporation number (ethanol): 1,7 (nBuAc = 1) (ASTM D 3539)

SECTION 10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

- Thermal decomposition / conditions to be avoided:

Can be distilled without decomposing at normal pressure

To avoid: warmth, flames, sparks

10.3 Possibility of hazardous reactions

Reacts with oxygen

Reactions with strong oxidizing agents.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

strong oxidizing agents

Strong acids

10.6 Hazardous decomposition products

Formation of carbon monoxide and carbon dioxide in case of fire.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity:
- Classification-relevant LD / LC50 values:

| 64-17-5 ethanol | | |
|-----------------|-------------|--------------------|
| Oral | LD50 | 10470 mg/kg (rat) |
| Dermal | LD50 | > 2000 mg/kg (rab) |
| Inhalativ | LC 50 / 4 h | > 20 mg/l (mouse) |

- Primary irritant effect:

- on the skin: mild irritant

- on the eye: Irritant effect.

- Sensitisation: No sensitizing effect known.

- Subacute to chronic toxicity: Can cause liver damage.

| 64-17-5 ethanol | | |
|-----------------|-------|--|
| Oral | NOAEL | 1760 mg/kg (rat) (OECD 408, 90 d, target organ: liver) |

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- Additional toxicological information:

High exposures irritates the mucous membranes of the eyes and the respiratory and digestive system.

High concentrations of vapors in air may cause drowsiness and dizziness.

- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

The ingredients in this mixture do not meet the criteria for classification as CMR categories according to CLP.

SECTION 12: Ecological information

12.1 Toxicity

- Aquatic toxicity:

| | |
|-----------------|--|
| 64-17-5 ethanol | |
| EC 50 / 48 h | > 10000 mg/l (<i>Daphnia magna</i>) |
| EC 50 / 72 h | 275 mg/l (Algae (<i>Chlorella vulgaris</i>)) |
| LC 50 / 48 h | 8140 mg/l (<i>Leuciscus idus</i>) |

12.2 Persistence and degradability

The product ist readily biodegradable,

biodegradabilty: BOD 5 (20 °C): ethanol = 71 % ThOD

12.3 Bioaccumulative potential

No bioaccumulation expected. The product is biodegradable and water soluble.

12.4 Mobility in soil

Product is water soluble. Additional ecological

information:

- General notes:

Do not allow to enter drainage system, surface or ground water

Water hazard class 1 (Self-assessment): slightly hazardous for water.

12.5 Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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The following advice is related to new material and not to any processed products. In case of a mixture with other products other disposal methods may become necessary. If in doubt seek advice from product supplier or from local authorities.

- Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

If possible, send to be recycled, otherwise burn or deposit in a certified facility.

- Uncleaned packagings: Disposal must be made according to official regulations.

- Recommendation:

Rented packaging: After optimal emptying, close immediately and return to the supplier without cleaning. Care should be taken that no other materials get into the packaging.

Other containers: After complete emptying and cleaning, send to be reconditioned or recycled.

Caution: Leftovers in the containers may cause the risk of explosion.

Uncleaned containers should not be perforated, cut or welded.

- Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information**14.1 UN number**

- ADR, IMDG, IATA: UN1170

14.2 UN proper shipping name

| | |
|------|--|
| ADR | 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| IMDG | ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) |
| IATA | ETHANOL SOLUTION |

14.3 Transport hazard class(es)

| | | | |
|---------------|---------------------------|------------|---------------------------|
| ADR | | IMDG, IATA | |
| Klasse: | 3 (F1) Flammable liquids. | Class: | 3 (F1) Flammable liquids. |
| Gefahrzettel: | 3 | Label: | 3 |

14.4 Packing group

- ADR, IMDG, IATA: II

14.5 Environmental hazards

Not applicable.

- Marine pollutant: No

14.6 Special precautions for user:

Warning: Flammable liquids.

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- Kemler Number: 33
- EMS Number: F-E,S-D

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

- Transport/ further information:
- ADR:
- Limited quantities (LQ): 1L
- Transport Category,: 2
- Tunnel Restriction Code: D/E
- UN „Model Regulation“:
UN1170, ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II

SECTION 15: Regulatory information

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

- VOC 100% volatile organic compounds (Council Directive 2010/75/EC).

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases

Complete wording of hazard statements and risk phrases (H- phrases) mentioned in section 3. These phrases refer to the constituents. The labelling for this product is stated in section 2.

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

- Department issuing data specification sheet: see item 1: Informing department
- Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
LEV. Local Exhaust Ventilation

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NOAEL: No Observed Adverse Effect Level

RPE: Respiratory Protective Equipment

RCR: Risk Characterisation Ratio (RCR= PEC/PNEC)

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Dangerous Substances, BAuA, Germany)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3