SECTION 1. Identification of the substance/mixture and of the company/enterprise

1.1. Product identifier

Product name : FERMOPLUS Liquid
Product code: refer to sales department

1.2. Relevant identified uses of the substance or mixture and uses advised against

Bioregulators and nutrients
Sectors of use:
Manufacture of food products[SU4]
Product category:
Process aid for enological use

Not recommended uses
Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

AEB SpA - Via Vittorio Arici 104 S.Polo - 25134 Brescia (BS) Italy
Tel. +39.030.2307.1 Fax +39.030.2307281
E-mail: info@aeb-group.com - Internet: www.aeb-group.com
E-mail tecnico competente/technical dept.: sds@aeb-group.com

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Produced by
AEB SpA
Via Vittorio Arici 104 S. Polo
25134 Brescia

1.4. Emergency telephone number

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Centralino/Switchboard: +39.030.2307.1 - (h 8.30-12.00 13.30-18.00 GMT +1; Lingua/Language: Italiano, English)

AEB USA
Switchboard: +1 2096258139 (GMT -8; Language: English)

AEB AFRICA (PTY) LTD
Switchboard: +27 215512700 (GMT +1; Language: English, Afrikaans)

AEB OCEANIA PTY LTD
Switchboard: +61 1300 704 971 (GMT +9; Language: English)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:
None

Hazard Class and Category Code(s):
Non hazardous

Hazard statement Code(s):
Non hazardous

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):
None

Hazard statement Code(s):
Non hazardous

Supplemental Hazard statement Code(s):
EUH210 - Safety data sheet available on request.

Precautionary statements:
None in particular.

Ingredients: yeast cell walls, yeast autolysates, water q.s. to 100. pH adjuster: phosphoric acid.
Food use, oenological use. Not intended for the final consumer. In accordance with current regulations on the specific matter.

2.3. Other hazards

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
Orthophosphoric acidB	>= 5 < 10%	Met. Corr. 1, H290; Acute Tox. 4, H302; Skin Corr. 1B, H314; Eye Dam. 1, H318 Limits: Skin Corr. 1B, H314 %C >=25; Skin Irrit. 2, H315 10<= %C <25; Eye Irrit. 2, H319 10<= %C <25; ATE oral = 500 mg/kg	015-011-00-6	7664-38-2	231-633-2	01-2119485924-24-XXXX

SECTION 4. First aid measures

4.1. Description of first aid measures

Inhalation:
Ventilate the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product).:
Wash thoroughly with soap and running water.

Direct contact with eyes (of the pure product).:
Wash immediately and thorougly with running water for at least 10 minutes.

Ingestion:
Not dangerous. In case of malaise consult a doctor.

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

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

If you feel unwell, consult a doctor and, if possible, show this document Symptomatic treatment

SECTION 5. Firefighting measures

5.1. Extinguishing media

Suggested extinguishing media:
Water spray, CO2, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing media to avoid:
Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus
Safety helmet and full protective clothing.
The water spray can be used to protect the people involved in the extinction.
You may also use self-contained breathing apparatus, especially when working in confined and poorly ventilated areas.
Keep containers cool with water spray

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:
Leave the area surrounding the spill or release. Do not smoke
Wear gloves and protective clothing

6.1.2 For emergency responders:
Eliminate all unguarded flames and possible sources of ignition. No smoking.
Privide a sufficient ventilation.
Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spills with earth or sand.
If the product has entered a watercourse, sewers or has contaminated soil or vegetation, notify the authorities.
Dispose of the waste material in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 Containment:
Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert materia or sucked it.
Prevent it from entering the sewer system.

6.3.2 Cleaning up:
After wiping up, wash with water the area and materials involved

6.3.3 Other information:
None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact and inhalation of vapors
At work do not eat or drink.
See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabelled containers.
Keep containers upright and safe by avoiding the possibility of falls or collisions.
Store in a cool and dry place, away from heat sources and direct exposure to sunlight.

7.3. Specific end use(s)

Manufacture of food products:
Handle with care.
Store in a clean, dry and ventilated place, away from heat and direct sunlight.
Store in the original container tightly closed.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

==========
Related to contained substances:
Orthophosphoric acid:
TLV - TWA (Threshold Limit Value - Time Weighted Average) - Eight hours (ppm)/(mg/m³)

Australia: X/1
Austria: X/1
Belgium: X/1
Canada - Ontario: x/1
Canada - Québec: x/1
Denmark: x/1
European Union: x/1
Finland: x/1
France: 0,2/1
Germany (AGS): x/2(1) Remarks: (1) inhalable aerosol

Germany (DFG): x/2(1) Remarks: (1) Inhalable fraction
Hungary: x/1
Ireland: x/1
Italy: x/1
Japan (JSOH): x/1
Latvia: x/1
New Zealand: x/1
Norway: x/1
People's Republic of China: x/1
Poland: x/1
Romania: x/1
Singapore: x/1
South Africa: x/2
South Africa Mining: x/1
South Korea: x/1
Spain: x/1
Sweden: x/1
Switzerland: x/2(1) Remarks: (1) Inhalable fraction
The Netherlands: x/1
USA - NIOSH: x/1
USA - OSHA: x/1
United Kingdom: x/1

TLV-STEL Threshold limit value − short-term exposure limit (ppm)/(mg/m³)

Austria: x/2
Belgium: x/2(1) Remarks: (1) 15 minutes average value
Canada - Ontario: x/3
Canada - Québec: x/3(1) Remarks: (1) 15 minutes average value
Denmark: x/2
European Union: x/2(1) General remarks: Bold-type: Indicative occupational exposure limit value (IOELV) - Remarks: (1) 15 minutes average value
Finland: x/2(1) Remarks: (1)15 minutes average value
France: 0,5(1)/2(1) General remarks: Italics type: Indicative statutory limit values Remarks: (1) 15 minutes average value
Germany (AGS): x/4(1)(2) Remarks: (1) inhalable aerosol (2) 15 Minutes average value
Germany (DFG):x/4(1)(2) Remarks:(1) Inhalable fraction (2) 15 minutes average value
Hungary: x/2(1) Remarks: (1)15 minutes average value
Ireland: X/2(1) Remarks: (1) 15 minutes reference period
Italy: x/2(1) Remarks: (1) 15 minutes average value
Latvia: x/2(1) Remarks: (1) 15 minutes average value
People's Republic of China: x/3(1) Remarks:(1) 15 minutes average value
Poland: x/2(1) Remarks: (1) 15 minutes average value
Romania: x/2(1) Remarks: (1) 15 minutes average value
South Africa: x/6(1) Remarks: (1) 15 minutes average value
South Africa Mining: x/3(1) Remarks: (1) 15 minutes average value
South Korea: x/3(1) Remarks: (1) 15 minutes average value
Spain: x/2(1) Remarks: (1) 15 minutes average value
Sweden: x/2(1) Remarks: (1) 15 minutes average value
Switzerland: x/4(1)(2) Remarks: (1) Inhalable fraction (2) 15 minutes average value
The Netherlands: x/2(1) Remarks: (1) 15 minutes average value
USA - NIOSH: x/3(1) Remarks: (1) 15 minutes average value
United Kingdom: x/2(1) Remarks: (1) 15 minutes average value

- Substance: Orthophosphoric acid
DNEL
Systemic effects Long term Workers inhalation = 10,7 (mg/m3)
Systemic effects Long term Consumers inhalation = 4,57 (mg/m3)
Systemic effects Long term Consumers oral = 0,1 (mg/kg bw/day)
Local effects Long term Workers inhalation = 1 (mg/m3)

Local effects Long term Consumers inhalation = 0,36 (mg/m3)
Local effects Short term Workers inhalation = 2 (mg/m3)

8.2. Exposure controls

Appropriate engineering controls:
Manufacture of food products:
No specific monitoring foreseen (act according to good practice and specific rules for the type of risk associated)

8.2.2 Individual protection measures:

(a) Eye / face protection
Not needed for normal use, unless otherwise provided by the employer and / or by assessments of environmental hygiene investigations

(b) Skin protection

(i) Hand protection
Not needed for normal use, unless otherwise provided by the employer and / or by assessments of environmental hygiene investigations

(ii) Other
Wear normal work clothing.

(c) Respiratory protection
Not needed for normal use, unless otherwise provided by the employer and / or by assessments of environmental hygiene investigations

(d) Thermal hazards
No hazard to report

Environmental exposure controls:
Use according to good working practices and avoid to disperse the product into the environment.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Physical state	cloudy liquid	
Colour	Beige	
Odour	not determined as it is considered not relevant for the characterization of the product	
Odour threshold	not determined as it is considered not relevant for the characterization of the product	
Melting point/freezing point	not determined as it is considered not relevant for the characterization of the product	
Boiling point or initial boiling point and boiling range	not determined as it is considered not relevant for the characterization of the product	

Physical and chemical properties	Value	Determination method
Flammability	not determined as it is considered not relevant for the characterization of the product	
Lower and upper explosion limit	not determined as it is considered not relevant for the characterization of the product	
Flash point	not determined as it is considered not relevant for the characterization of the product	ASTM D92
Auto-ignition temperature	not determined as it is considered not relevant for the characterization of the product	
Decomposition temperature	not determined as it is considered not relevant for the characterization of the product	
pH	2,5 - 2,8	
Kinematic viscosity	not determined as it is considered not relevant for the characterization of the product	
Solubility	not determined as it is considered not relevant for the characterization of the product	
Water solubility	not determined as it is considered not relevant for the characterization of the product	
Partition coefficient n-octanol/water (log value)	not determined as it is considered not relevant for the characterization of the product	
Vapour pressure	not determined as it is considered not relevant for the characterization of the product	
Density and/or relative density	1,15 ± 0,05 (20°C)	
Relative vapour density	not determined as it is considered not relevant for the characterization of the product	
Particle characteristics	not determined as considered not relevant for the characterization of the product	

9.2. Other information

9.2.1 Information with regard to physical hazard classes

Irrilevant

9.2.2 Other safety characteristics

Irrilevant

SECTION 10. Stability and reactivity

10.1. Reactivity

No reactivity hazards

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

There are no hazardous reactions

10.4. Conditions to avoid

Nothing to report

10.5. Incompatible materials

None in particular

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11. Toxicological information

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

ATE(mix) oral = 6.666,7 mg/kg

(a) acute toxicity: Orthophosphoric acid: Ingestion - LD50 rat (mg/kg/24h bw): 300-2000 mg/kg bw - Notes: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
Contact with skin - LC50 rat/rabbit (mg/kg/ 24h bw): >2000
Inhalation - LD50 rat (mg/l/4h): nd
(b) skincorrosion/irritation: Orthophosphoric acid: Corrosive
Orthophosphoric acid: Irritating
(c) serious eye damage/irritation: Orthophosphoric acid: Corrosive
Orthophosphoric acid: Irritating
(d) respiratoryorskinsensitisation: Orthophosphoric acid: Not available
(e) germ cell mutagenicity: Orthophosphoric acid: Non-mutagenic
(f) carcinogenicity: Orthophosphoric acid: Non-carcinogenic
(g) eproductivetoxicity: Orthophosphoric acid: Non-toxic for reproduction
(h) specific target organ toxicity (STOT) single exposure: Orthophosphoric acid: Not available
(i) specific target organ toxicity (STOT) repeated exposureOrthophosphoric acid: Not available
(j) aspiration hazard: Orthophosphoric acid: Not available

==========
Related to contained substances:
Orthophosphoric acid:
LD50 (rat) Oral (mg/kg body weight) = 500

11.2. Information on other hazards

No data available.

11.2.1. Endocrine disrupting properties

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

SECTION 12. Ecological information

12.1. Toxicity

==========
Related to contained substances:
Orthophosphoric acid:
Acute toxicity - fish LC50 (mg/l/96h): na
Acute toxicity - crustaceans EC50 (mg/l/48h): na Daphnia magna
Acute toxicity algae ErC50 (mg/l/72-96h): >100
Chronic toxicity - fish NOEC (mg/l): na
Chronic toxicity - crustaceans NOEC (mg/l): 56
Chronic toxicity algae NOEC (mg/l): 100 (72h) Toxicity of microorganisms: EC50 (3 h)1 g/L- NOEC (3 h)1g/L

Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

Use according to good working practices and avoid to disperse the product into the environment.

12.2. Persistence and degradability

==========
Related to contained substances:
Orthophosphoric acid:
Not readily biodegradable

12.3. Bioaccumulative potential

==========
Related to contained substances:
Orthophosphoric acid:
Not bioaccumulative

12.4. Mobility in soil

==========
Related to contained substances:
Orthophosphoric acid:
Not available

12.5. Results of PBT and vPvB assessment

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

12.6. Endocrine disrupting properties

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

12.7. Other adverse effects

No adverse effects

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.
Recover if possible. Operate according to local or national regulations

SECTION 14. Transport information

14.1. UN number or ID number

Not included in the field of application of regulations concerning the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

14.2. UN proper shipping name

None

14.3. Transport hazard class(es)

None

14.4. Packing group

None

14.5. Environmental hazards

None

14.6. Special precautions for user

No data available.

14.7. Maritime transport in bulk according to IMO instruments

Transport in bulk is not foreseen

SECTION 15. Regulatory information

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

Restrictions relating to the product or the substances contained (Annex XVII EC Reg. 1907/2006): not applicable
Substances in Candidate list (art. 59 EC Reg. 1907/2006): the product does not contain SVHC in percentage = a 0.1 %.

Regulation (EU) 1169/2011: see point 2.2
Regulation (EU) 1308/2013; see point 2.2
Regulation (EC) 1333/2008; see point 2.2

15.2. Chemical safety assessment

Chemical safety assessment was carried out by the supplier

SECTION 16. Other information

16.1. Other information

Points modified compared to previous release: 3.2 Mixtures, 4.3. Indication of any immediate medical attention and special treatment needed, 8.1. Control parameters 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008, 11.2. Information on other hazards 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Description of hazard statements set out in paragraph 3
H290 = May be corrosive to metals.
H302 = Harmful if swallowed.
H314 = Causes severe skin burns and eye damage.
H318 = Causes serious eye damage.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:
No hazard to report.

Main normative references:
Reg. (CE) n. 1907 del 18/12/06 REACH (Registration, Evaluation and Authorisation of CHemicals) et seq.
Reg. (CE) 1272/2008 CLP (Classification Labelling and Packaging) et seq.
Directive 2012/18/EU (on the control of major-accident hazards involving dangerous substances) et seq.

Training required: This document must be submitted to the employer to determine the possible need for appropriate training for workers to ensure protection of human health and the environment.

n.a.: not applicable
n.d.: not available
ADR: Accord europèen relative au transport International des merchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE: Acute Toxicity Estimat
BFC: BioconCentration Factor
BOD: Biochemical Oxigen Demand
CAS: Chemical Abstract Service number
CAP: Centre AntiPoison

CE/EC number EINECS (European Inventory of existing Commercial Substances) e ELINCS (European List of notified Chemical Substances)
CL50/LC50: Lethal Concentration 50
DL50/LD50: Lethal Dose 50
COD: Chemical Oxygen Demand
DNEL: Derived No Effect Level
EC50: half maximal Effective Concentration
ERC: Enviroment Release Classes
EU/UE: European Union
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods code
Kow: Octanol water partition coefficient
NOEC: No Observed Effect Concentration
OEL: Occupational Exposure Limit
PBT: Persistent Bioaccumulative and Toxic
PC: Product Categories
PNEC: Predicted No Effect Concentration
PROC: Process Categories
RID: Règlement concernent le transport International ferroviaire des merchandises dangereuses (Regulations concerning International rail transport of dangerous goods)
STOT: Target Organ Systemic Toxicity
STOT (RE): Repeated Exposure
STOT (SE): Single Exposure
STP: Sewage Treatment Plants
SU: Sector of Use
SVCH: Substance of Very High Concern
TLV: Threshold Limit Value
vPvB: Very Persistent Very Bioaccumulative

References and Sources:
- ECHA Registered Substances:
https://echa.europa.eu/web/guest/information-on-chemicals/registered-substances

- SDS raw material supplier

- GESTIS International Limit Value: http://limitvalue.ifa.dguv.de

This msds was made in good faith by technical Office on the basis of the information available at the date of the last revision. The person in charge must regularly inform the employees about the specific risks they encounter when using this substance/product. The information contained here relate only to the substance/the preparation indicated and may not apply if the product is used improperly or in combination with others. Nothing contained herein shall be construed as a guarantee, either express or implied. It is the responsibility of the user to ensure the opportunities and completeness of the information contained herein for their own particular use.

*** this tab annuls and replaces any previous edition. (IIXX)

Changes to the previous edition: raw materials data update