

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

1.1. Product identifier

Product name : ENDOZYM Polifruit S
Product code: refer to sales department

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

Enzyme preparations
Sectors of use:
Manufacture of food products[SU4]
Product category:
Non Tradotta

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

1.3. Details of the supplier of the safety data sheet

AEB France Sarl
Siège social : 10 rue du stade 68240 Kaysersberg-Vignoble, France Tél. +33 (0)389.47.32.33 - Fax +33 (0)389.47.33.34
E-mail: infofrance@aeb-group.com - Internet: www.aeb-group.com

Produced by
AEB FRANCE Sarl - 10, rue du Stade - 68240 KAYSERSBERG-VIGNOBLE, France

1.4. Emergency telephone number

AEB SpA
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:
GHS08

Hazard Class and Category Code(s):
Resp. Sens. 1

Hazard statement Code(s):
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

The product, if inhaled, can cause sensitization.

2.2. Label elements

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

Pictogram, Signal Word Code(s):
GHS08 - Danger



Hazard statement Code(s):
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Supplemental Hazard statement Code(s):
not applicable

Precautionary statements:

Prevention

P261 - Avoid breathing vapours/spray.

P284 - In case of inadequate ventilation wear respiratory protection.

Response

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or a doctor.

Contains:

Pectinase, Protease, Cellulase.

Information concerning the components: glycerol, pectinase, protease, cellulase, ammonium sulfate, potassium sorbate, sodium benzoate, water q.s. to 100

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

Do not ingest. Keep out of reach of children.

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration[w/w]	Classification	IUB	CAS	EINECS	REACH
Glycerol substance for which there are Community workplace exposure limits	>= 25 < 50%			56-81-5	200-289-5	
Pectinase	>= 1 < 2,5%	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1, H334; STOT SE 3, H335	3.2.1.15	9032-75-1	232-885-6	
Protease	>= 0,1 < 1%	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1, H334; STOT SE 3, H335	3.4.23.18	9001-92-7	232-642-4	
Cellulase	>= 0,1 < 1%	Resp. Sens. 1, H334	3.2.1.4	9012-54-8	232-734-4	

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 thoroughly 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 experiencing respiratory symptoms: Call a POISON CENTER or doctor.

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:

Move away from the area surrounding the spill or release. Not smoking. Wear protective gloves and clothing.

6.1.2 For emergency responders:

Eliminate all open flames and possible sources of ignition. Not smoking. Provide adequate ventilation. Evacuate the danger area and, if necessary, 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:

Rapidly recover the product, wear a mask and protective clothing (for specifications refer to section 8.2. SDS)

Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert material or suck 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
Handle the product after consulting all other sections of this safety data sheet.
At work do not eat or drink.
See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Store in the original sealed package, away from light, in a dry and odorless place and at a temperature between 5 and 15 ° C.
Do not freeze.
Batch number (BN) and expiry date (EXP): see barcode.

7.3. Specific end use(s)

Manufacture of food products:
Store in the original sealed package, away from light, in a dry and odorless place and at a temperature between 5 and 15 ° C.
Do not freeze.
Batch number (BN) and expiry date (EXP): see barcode.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

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Related to contained substances:
Glycerol:
Valeur limite - Huit heures
Australie 10 (1) mg/m³
Belgique 10 mg/m³
Canada - Ontario 10 mg/m³
Canada - Québec 10 mg/m³
Finlande 20 mg/m³
France 10 mg/m³
Allemagne (AGS) 200 (1) mg/m³
Allemagne (DFG) 200 (1) mg/m³
Irlande 10 mg/m³
Nouvelle-Zélande 10 (1) mg/m³
Pologne 10 mg/m³
Singapour 10 mg/m³
Afrique du Sud Exploitation minière 10 ppm
Corée du Sud 10 mg/m³
Espagne 10 mg/m³

Suisse 50 aérosol inhalable mg/m³
États-Unis - OSHA 15 (1) mg/m³
5 (2) mg/m³
Royaume-Uni 10 mg/m³

Valeur limite - Court terme

Allemagne (AGS) 400 (1)(2) mg/m³
Allemagne (DFG) 400 (1)(2) mg/m³
Suisse 100 aérosol inhalable mg/m³

Remarques

Australie (1) Cette valeur concerne les poussières inhalables ne contenant pas d'amiante et < 1 % de silice cristalline.
Allemagne (AGS) (1) Fraction inhalable (2) Valeur moyenne sur 15 minutes
Allemagne (DFG) (1) Fraction inhalable (2) Valeur moyenne sur 15 minutes
Nouvelle-Zélande (1) La valeur pour la poussière inhalable ne contenant pas d'amiante et moins de 1 % de silice libre.
USA - OSHA (1) Fraction inhalable (2) Fraction respirable
Ireland: x/10
New Zealand: x/10 (1)
Poland: x/10
Singapore: x/10
South Korea: x/10
Spain: x/10
Switzerland: x/50 inhalable aerosol
USA-OSHA: x/15 inhalable dust: x/5respirable dust
United Kingdom: x/10

Limit value - Short term

(ppm)/(mg/m³)
Germany (AGS): x/400 (1)(2)
Germany (DFG): x/400 (1)(2)
Switzerland: x/100 inhalable aerosol

Remarks

Australia: (1) This value is for inhalable dust containing no asbestos and < 1% crystalline silica.
Germany (AGS): (1) Inhalable fraction (2) 15 minutes average value
Germany (DFG): (1) Inhalable fraction (2) 15 minutes average value
New Zealand: (1) The value for inhalable dust containing no asbestos and less than 1% free silica

- Substance: Cellulase

PNEC

Sweet water = 0,0237 (mg/l)

Sea water = 0,0237 (mg/l)

intermittent emissions = 0,237 (mg/l)

STP = 65 (mg/l)

ground = 0,00376 (mg/kg ground)

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

Use adequate protective respiratory equipment (EN 14387:2008)

(d) Thermal hazards

No hazard to report

Environmental exposure controls:

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Related to contained substances:

Cellulase:

Eye/face protection

Visor and goggles. Use eye protection tested and approved in accordance with the requirements of appropriate technical standards as NIOSH (US) or EN 166 (EU)

Skin protection

Manipulate with gloves. The gloves should be checked before being used. Use a suitable technique for the removal of gloves (without touching the outside of the glove) to avoid skin contact with this product dispose of contaminated gloves after use in accordance with current legislation and good laboratory practices. Wash and dry your hands.

Selected protective gloves shall comply with the requirements of EU Directive 89/686/EEC and EN 374 standards arising therefrom.

Full contact

Material: nitrile rubber

minimum thickness: 0.11 mm

Penetration time: 480 min >

Material tested: Dermatril (Aldrich Z677272, size M)

Splash protection

Material: nitrile rubber

minimum thickness: 0.11 mm

Penetration time: 30 min >

Material tested: Dermatril (Aldrich Z677272, size M)

Data source: KCL GmbH, D-36124 Eichenzell, tel. +49 (0) 6659 87300, e-mail sales@kcl.de, test method: EN374

When used in solution, or mixed with other substances, and under conditions other than those mentioned in EN 374, contact the supplier of gloves approved by the EC. This recommendation applies to the Council and must be assessed by an Industrial Hygienist with the specific situation of intended use by our customers. You should not be interpreted as an endorsement of a specific exposure scenario.

Physical protection

Full protective clothing resistant to chemical substances, the type of protective equipment should be selected depending on the concentration and amount of hazardous substance in the workplace.

Respiratory protection

For low exposure levels to use respirators for dusts of P95 (US) type or of type P1 (EU EN 143). For most high security levels use cartridge type respirators OV/AG/P99 or ABEK-type P2 (EU EN 143). Use respirators and components tested and approved by the relevant standardisation bodies, such as the NIOSH (U.S.A.) CEN (EU).

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Physical state	Liquid	
Colour	light brown	
Odour	not determined as considered not relevant for the characterization of the product	
Odour threshold	not determined as considered not relevant for the characterization of the product	
Melting point/freezing point	not determined as considered not relevant for the characterization of the product	
Boiling point or initial boiling point and boiling range	not determined as considered not relevant for the characterization of the product	
Flammability	not determined as considered not relevant for the characterization of the product	
Lower and upper explosion limit	not determined as considered not relevant for the characterization of the product	
Flash point	not determined as considered not relevant for the characterization of the product	
Auto-ignition temperature	not determined as considered not relevant for the characterization of the product	
Decomposition temperature	not determined as considered not relevant for the characterization of the product	
pH	6.5±1	
Kinematic viscosity	not determined as considered not relevant for the characterization of the product	
Solubility	soluble	
Water solubility	soluble in water	
Partition coefficient n-octanol/water (log value)	not determined as considered not relevant for the characterization of the product	
Vapour pressure	not determined as considered not relevant for the characterization of the product	
Density and/or relative density	not determined as considered not relevant for the characterization of the product	
Relative vapour density	not determined as 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

No data available.

9.2.2 Other safety characteristics

No data available.

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

Not available

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

(a) acute toxicity: Glycerol: Ingestion - LD50 rat (mg / kg / 24h bw): not available
Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): not available
Inhalation - LD50 rat (mg / l / 4h): not available
Pectinase: Ingestion - LD50 rat (mg / kg / 24h bw): nd
Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): nd
Inhalation - LD50 rat (mg / l / 4h): nd
Protease: Ingestion - LD50 rat (mg / kg / 24h bw): na Skin contact - LD50 rabbit (mg / kg / 24h bw): na Inhalation -

LD50 rat (mg / l / 4h): na

Cellulase: Ingestion - LD50 rat (mg / kg / 24h bw): n.a.

Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): n.a.

Inhalation - LD50 rat (mg / l / 4h): n.a.

(b) skincorrosion/irritation: Glycerol: Not corrosive

Pectinase: Unavailable

Protease: Unavailable

Cellulase: Unavailable

Glycerol: Not irritating

Pectinase: Irritating

Protease: Causes skin irritation

Cellulase: Unavailable

(c) serious eye damage/irritation: Glycerol: Not corrosive

Pectinase: Unavailable

Protease: Unavailable

Cellulase: Unavailable

Glycerol: Not irritating

Pectinase: Irritating

Protease: Causes severe eye irritation

Cellulase: Unavailable

(d) respiratoryorskinsensitisation: The product, if inhaled, can cause sensitization.

Glycerol: Unavailable

Pectinase: May cause sensitization by inhalation

Protease: May cause sensitization by inhalation.

Cellulase: May cause sensitization by inhalation

(e) germ cell mutagenicity: Glycerol: Unavailable

Pectinase: Unavailable

Protease: unavailable

Cellulase: Unavailable

(f) carcinogenicity: Glycerol: Unavailable

Pectinase: Unavailable

Protease: unavailable

Cellulase: Unavailable

(g) eproductivetoxicity: Glycerol: Unavailable

Pectinase: Unavailable

Protease: unavailable

Cellulase: Unavailable

(h) specific target organ toxicity (STOT) single exposure: Glycerol: Unavailable

Pectinase: Unavailable

Protease: It can irritate the respiratory tract

Cellulase: Unavailable

(i) specific target organ toxicity (STOT) repeated exposure: Glycerol: Unavailable

Pectinase: Unavailable

Protease: Once sensitized, subsequent exposure to very low levels can trigger a strong allergic reaction.

Cellulase: Once sensitized, subsequent exposure to very low levels can trigger a strong allergic reaction.

(j) aspiration hazard: Glycerol: Unavailable

Pectinase: Unavailable

Protease: It can irritate the respiratory tract

Cellulase: May cause breathing difficulties if inhaled

11.2. Information on other hazards

No data available.

SECTION 12. Ecological information

12.1. Toxicity

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Related to contained substances:

Glycerol:

Acute toxicity - fish LC50 (mg / l / 96h): not available

Acute toxicity - crustaceans EC50 (mg / l / 48h): not available

Acute toxicity bacteria EC50 (mg / l / 3h): not available

Pectinase:

Acute toxicity - fish LC50 (mg / l / 96h): n.a.

Acute toxicity - crustaceans EC50 (mg / l / 48h): n.a.

Acute toxicity algae ErC50 (mg / l / 72-96h): n.a

Chronic toxicity - fish NOEC (mg / l): n.a

Chronic toxicity - crustaceans NOEC (mg / l): n.a

Chronic toxicity algae NOEC (mg / l): n.a

Protease:

Acute toxicity - fish LC50 (mg / l / 96h): nd

Acute toxicity - crustaceans EC50 (mg / l / 48h): nd

Acute toxicity algae ErC50 (mg / l / 72-96h): nd

Chronic toxicity - fish NOEC (mg / l): nd

Chronic toxicity - crustaceans NOEC (mg / l): nd

Chronic toxicity algae NOEC (mg / l): nd

Cellulase:

Acute toxicity - fish LC50 (mg / l / 96h): n.a.

Acute toxicity - crustaceans EC50 (mg / l / 48h): n.a.

Acute toxicity algae ErC50 (mg / l / 72-96h): n.a.

Chronic toxicity - fish NOEC (mg / l): n.a.

Chronic toxicity - crustaceans NOEC (mg / l): n.a.

Chronic toxicity algae NOEC (mg / l): n.a.

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

12.2. Persistence and degradability

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Related to contained substances:

Glycerol:

unavailable

Pectinase:

Unavailable

Protease:

Unavailable

Cellulase:

Unavailable

12.3. Bioaccumulative potential

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Related to contained substances:

Glycerol:
unavailable

Pectinase:
Unavailable

Protease:
Unavailable

Cellulase:
Unavailable

12.4. Mobility in soil

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Related to contained substances:

Glycerol:
unavailable

Pectinase:
Unavailable

Protease:
Unavailable

Cellulase:
Unavailable

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

No data available.

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 contained substances (All. XVII Reg. EC 1907/2006): not applicable
Substances in Candidate List (art. 59 Reg. EC 1907/2006): the product does not contain SVHC in a proportion $\geq 0.1\%$.

Substances subject to authorisation (Ann. XIV Reg. CEC 1907/2006): the product does not contain SVHC in a proportion $\geq 0.1\%$.

Reg. (EU) n. 1169/2011: see 2.2

Reg (UE) 1332/2008: see to 2.2

15.2. Chemical safety assessment

No chemical safety assessment was carried out by the supplier

SECTION 16. Other information

16.1. Other information

Description of hazard statements set out in paragraph 3

H315 = Causes skin irritation.

H319 = Causes serious eye irritation.

H334 = May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 = May cause respiratory irritation.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled Classification procedure: Calculation method

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.

Regulation (EC) n. 648 of 31/03/04 (on detergents) et seq.

Regulation (UE) n. 1169/2011 (on the provision of food information to consumers)

Directive 2012/18/EU (on the control of major-accident hazards involving dangerous substances) et seq.

Regulation (UE) 528/2012 (Biocides) 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 européen relative au transport International des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

ATE: Acute Toxicity Estimati

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 concernant le transport International ferroviaire des marchandises 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 supplier
- GESTIS DNEL Database: <http://www.dguv.de/ifa/gestis/gestis-dnel-datenbank/index-2.jsp>
- GESTIS International Limit Value: <http://limitvalue.ifa.dguv.de>

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

Changes to the previous edition: issue according to Reg. (EU) 878/20
