

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

1.1. Product identifier

Product name : ENDOZYM Cellofruit IF

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:

Technological adjuvant for limited food use

Not recommended uses

Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

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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):

EUH208 - Contains Cellulase, PECTINE LYASE (PL). May produce an allergic reaction.

EUH210 - Safety data sheet available on request.

Precautionary statements:

None in particular.

Contains:

Information concerning the components: glycerol, pectinolyase 30 U/g, ammonium sulphate, cellulase 60 U/g, potassium chloride, water up to 100.

Food use. Not intended for the final consumer. In accordance with current regulations on the specific matter. Only for industrial use.

2.3. Other hazards

The substance / mixture does NOT contain substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

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	Index	CAS	EINECS	REACH
GLYCEROL substance for which there are Community workplace exposure limits	>= 25 < 50%			56-81-5 3	200-289-5	01-2119471 987-18-XXX X
PECTINE LYASE (PL)	>= 0,1 < 1%	Resp. Sens. 1, H334		9033-35-6	232-894-5	
Cellulase	>= 0,1 < 1%	Resp. Sens. 1, H334		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 hazardous. It's possible to give activated charcoal in water or medicinal mineral vaseline oil.

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

No data available.

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.

Provide 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 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
At work do not eat or drink.
See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Handle with Care. Store in a clean, dry and ventilated place, away from heat sources and direct sunlight. Keep the container tightly closed. Do not freeze.
Respect the expiration date indicated on the package.

7.3. Specific end use(s)

Manufacture of food products:
Handle with Care. Store in a clean, dry and ventilated place, away from heat sources and direct sunlight. Keep the container tightly closed. Do not freeze.
Respect the expiration date indicated on the package.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

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Related to contained substances:

GLYCEROL:

Limit value - Eight hours

(ppm)/(mg/m³)

Austria: x/10 (1)

Belgium: x/10

Canada – Ontario: x/10

Canada – Québec: x/10

Finland: x/20

France: x/10

Germany (AGS): x/200 (1)
Germany (DFG): x/200 (1)
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/5 respirable 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: GLYCEROL

DNEL

Systemic effects Long term Consumers oral = 229 (mg/kg bw/day)

Local effects Long term Workers inhalation = 56 (mg/m³)

Local effects Long term Consumers oral = 33 (mg/kg bw/day)

PNEC

Sweet water = 0,885 (mg/l)

sediment Sweet water = 3,3 (mg/kg/sediment)

Sea water = 0,085 (mg/l)

sediment Sea water = 3,3 (mg/kg/sediment)

intermittent emissions = 8,85 (mg/l)

STP = 1000 (mg/l)

ground = 0,141 (mg/kg ground)

- 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 required for normal use, unless otherwise specified by the employer and / or by survey evaluations environmental hygiene.

(b) Skin protection

(i) Hand protection

Not required for normal use, unless otherwise specified by the employer and / or by survey evaluations environmental hygiene.

(ii) Other

Wear normal work clothing.

(c) Respiratory protection

Not required for normal use, unless otherwise specified by the employer and / or by survey evaluations environmental hygiene.

(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
Appearance	viscous liquid	
Colour	Brown	
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	
pH	3.5-8.5	
Melting point/freezing point	not determined as it is considered not relevant for the characterization of the product	
Initial boiling point and boiling range	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	
Evaporation rate	not determined as it is considered not relevant for the characterization of the product	
Flammability (solid, gas)	not determined as it is considered not relevant for the characterization of the product	
Upper/lower flammability or explosive limits	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	
Vapour density	not determined as it is considered not relevant for the characterization of the product	
Relative density	0.95-1.3	
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	not determined as it is considered not relevant for the characterization of the product	
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	
Viscosity	not determined as it is considered not relevant for the characterization of the product	
Explosive properties	not determined as it is considered not relevant for the characterization of the product	
Oxidising properties	not determined as it is considered not relevant for the characterization of the product	

9.2. Other information

No data available.

SECTION 10. Stability and reactivity

10.1. Reactivity

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Related to contained substances:

PECTINE LYASE (PL):

Not applicable

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

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 = ∞

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

(a) acute toxicity: GLYCEROL: Ingestion - LD50 rat (mg / kg / 24h bw): NA

Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): NA

Inhalation - LD50 rat (mg / l / 4h): NA
PECTINE LYASE (PL): Non-toxic
Cellulase: Ingestion - LD50 rat (mg / kg / 24h bw):> 2880
Skin contact - LC50 rat / rabbit (mg / kg / 24h bw): n.a.
Inhalation - LD50 rat (mg / l / 4h):> 4.44
(b) skin corrosion/irritation: GLYCEROL: Not corrosive
PECTINE LYASE (PL): Non-corrosive
Cellulase: Non-corrosive
GLYCEROL: Not irritating
PECTINE LYASE (PL): Slightly irritating
Cellulase: Not irritating
(c) serious eye damage/irritation: GLYCEROL: Not corrosive
PECTINE LYASE (PL): Non-corrosive
Cellulase: Non-corrosive
GLYCEROL: Not irritating
PECTINE LYASE (PL): Irritating
Cellulase: Not irritating
(d) respiratory or skin sensitisation: GLYCEROL: Unavailable
PECTINE LYASE (PL): Respiratory sensitizer
Cellulase: Sensitizing
(e) germ cell mutagenicity: GLYCEROL: Unavailable
PECTINE LYASE (PL): Not available
Cellulase: Not mutagenic
(f) carcinogenicity: GLYCEROL: Unavailable
PECTINE LYASE (PL): Not available
Cellulase: Not available
(g) reproductive toxicity: GLYCEROL: Unavailable
PECTINE LYASE (PL): Not available
(h) specific target organ toxicity (STOT) single exposure: GLYCEROL: Unavailable
PECTINE LYASE (PL): Not available
Cellulase: Not available
(i) specific target organ toxicity (STOT) repeated exposure: GLYCEROL: Unavailable
PECTINE LYASE (PL): Not available
Cellulase: Not available
(j) aspiration hazard: GLYCEROL: Unavailable
PECTINE LYASE (PL): Not available
Cellulase: Not available

Health Hazards:

Eye contact: Accidental contact of product with eyes may cause irritation.

Skin Contact: Product is not an irritant. Prolonged or repeated contact may defeat and irritate the skin and cause dermatitis in some cases.

Ingestion: The ingested product may cause irritation of the mucous membranes of the throat and digestive system leading to digestive symptoms and abnormal bowel disorders.

Inhalation: Prolonged exposure to vapours or mists of product may cause respiratory irritation.

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): NA

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

Acute toxicity bacteria EC50 (mg / l / 3h): NA

PECTINE LYASE (PL):

Not ecotoxic

Cellulase:

Acute toxicity - LC50 fish (mg / l / 96h):> 52.1

Acute toxicity - crustaceans EC50 (mg / l / 48h):> 52.1

Acute toxicity ErC50 algae (mg / l / 72-96h):> 52 1

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:

ND

PECTINE LYASE (PL):

Biodegradable

Cellulase:

Easily biodegradable

12.3. Bioaccumulative potential

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Related to contained substances:

GLYCEROL:

ND

PECTINE LYASE (PL):

Not bioaccumulabile

Cellulase:

Not available

12.4. Mobility in soil

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Related to contained substances:

GLYCEROL:

ND

PECTINE LYASE (PL):

Not available

Cellulase:
Not available

12.5. Results of PBT and vPvB assessment

No PBT/vPvB ingredient is present

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
Substances subject to authorisation (Ann. XIV Reg. CEC 1907/2006): the product does not contain SVHC
Reg. EC 648/04: see 2.2
Reg. (EU) n. 1169/2011: see 2.2
Reg (UE) 528/2012: 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
H334 = May cause allergy or asthma symptoms or breathing difficulties if inhaled

Classification based on data of all mixture components

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.

Procedure used to classify under CLP mixture (Reg . EC 1272/2008): irrilevant

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 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 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: first issue.