

Date: 15 January 2016

Former date: -

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier**

Trade name

UPM cellulase enzyme

Company product code

-

Reach registration number

-

1.2 Relevant identified uses of the substance or mixture and uses advised against**The uses of the chemical**

Degradation of cellulose.

Classification of economic activities (NACE)**Use categories (UC62)**

The chemical can be used by the general public

☐

The chemical is used by the general public only

☐**1.3 Details of the supplier of the safety data sheet****Manufacturer, importer, other undertaking**

UPM-Kymmene Oyj

Street address

Alvar Aallon katu 1

Postcode and post office

FI-00100, Helsinki

Post-office box

P.O. Box 380

Postcode and post office

FI-00101, Helsinki

Telephone number

+358 20 41 51 11

Telefax**E-mail address**

msds@upm.com

Finnish Business ID (Y code)

1041090-0

1.4 Emergency telephone numberThe general emergency number **112**Poison Information centre (in Finland), PL 790 (Tukholmankatu 17), 00029 HUS
open 24 h daily

+358 9 471977 or +358 9 4711

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture
(1272/2008 CLP):** Not classified.**2.2 Label elements**
No pictogram required.**Signal Word:** -**Hazard Statements:**

EUH208 Contains cellulase. May produce an allergic reaction.

Trade name: UPM cellulase enzyme

Date: 15 January 2016

Former date: -

Precautionary Statements:

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2.3 Other hazards

Not known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

CAS/EC number and the registration number	Name of the ingredient	Concentration	Classification
CAS 9012-54-8 EC 232-734-4 REACH 01-2119949289-21	Cellulase	0,1 – 1 %	Resp. Sens. 1 H334

This mixture contains enzymes/proteins up to 10 mg / ml.

Hazard statements are listed in section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information: Immediately remove affected person from source of exposure. Provide first-aid, rest, warmth and fresh air.

Inhalation: Fresh air. Get medical attention if any discomfort continues or symptoms occur.

Ingestion: NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth and provide fresh air. Give water to drink. Get medical attention if any discomfort continues.

Skin contact: Remove contaminated clothing. Wash the skin with soap and water. Get medical attention if any discomfort continues.

Eye contact: Check for contact lenses which must be removed from the eyes before rinsing (if easy to do). Promptly rinse eyes with plenty of clean water while lifting the eyelids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort or irritation persists.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: May produce an allergic reaction.

Ingestion: No symptoms or effects known.

Skin contact: No symptoms or effects known.

Eye contact: No symptoms or effects known.

4.3 Indication of any immediate medical attention and special treatment needed

No specific instructions.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

The extinguishing agent can be selected according to the surrounding fire.

Unsuitable extinguishing media: Not known.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: During fire, toxic or irritant gases/fumes (CO, CO₂) may be evolved.

Unusual Fire & Explosion Hazards: Not known.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid breathing vapour, mist or spray. Keep unnecessary people at a safe distance. Wear protective clothing (see section 8).

6.2 Environmental precautions

Do not allow spilt material to enter drains or water courses. Avoid spreading spilled material.

6.3 Methods and material for containment and cleaning up

Clean up spills using an absorbent material (e.g. universal binder, vermiculite, diatomaceous earth) to collect it. Place into containers for disposal (see section 13). Flush the area with plenty of water.

6.4 Reference to other sections

Safe handling and storage (see section 7).
Exposure controls and personal protection (see section 8).
Disposal considerations (see section 13).

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing. Keep away from heat and other sources of ignition. Handle in accordance with good industrial hygiene and safety practice. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed. Store in dry, cool and well-ventilated area. Keep away from combustible and flammable materials. Keep away from foodstuffs and beverages.
Incompatible materials; see section 10.5.

7.3 Specific end use(s)

Not known.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

National occupational exposure limit values

Not applicable.

Other limit values

Not applicable.

DNEL

Not applicable.

PNEC

Not applicable.

8.2 Exposure controls

Appropriate engineering controls

Provide adequate ventilation. If user operations generate fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Eye/face protection

Wear protective safety glasses (EN 166).

Skin protection

Wear appropriate protective clothing to minimize skin contact. Remove soiled or soaked clothing immediately. Clean skin thoroughly after work.

Hand protection

Wear protective disposable gloves (EN 374) to prevent skin exposure. Nitrile rubber.

Respiratory protection

Normally not necessary. Wear appropriate respirator when ventilation is inadequate. Filter A P2 (EN 14387).

Environmental exposure controls

Do not allow spilt material to enter drains or water courses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid.
Odour	Not determined.
Odour threshold	Not determined.
pH	Not determined.
Melting point/freezing point	Not determined.
Initial boiling point and boiling range	Not determined.

Trade name: UPM cellulase enzyme

Date: 15 January 2016

Former date: -

Flash point	Not determined.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not determined.
Solubility(ies)	Miscible with water
Partition coefficient: n-octanol/water	Not determined.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2 Other information
Not known.

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity**
No specific test data related to reactivity available for this product.
- 10.2 Chemical stability**
Stable under normal conditions of storage and use.
- 10.3 Possibility of hazardous reactions**
No dangerous reactions known under normal conditions of use.
- 10.4 Conditions to avoid**
Keep away from heat, sparks and open flame.
- 10.5 Incompatible materials**
Oxidizing agents, strong acids and strong alkalis.
- 10.6 Hazardous decomposition products**
No hazardous decomposition products known under normal conditions of use.
During fire hazardous decomposition products such as carbon monoxide and carbondioxide) may be evolved.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

This product is not classified as acute toxic.

Information on ingredients:

Cellulase

LD50 (oral, rat) > 2000 mg/kg

Skin corrosion/irritation

This product is not classified as corrosive/irritant to skin.

Serious eye damage/irritation

This product is not classified as damaging/irritant to eyes.

Trade name: UPM cellulase enzyme

Date: 15 January 2016

Former date: -

Respiratory or skin sensitisation

This product is not classified as sensitizer. The product contains cellulase. May produce an allergic reaction.

Germ cell mutagenicity

This product is not classified as mutagenic.

Carcinogenicity

This product is not classified as carcinogenic.

Reproductive toxicity

This product is not classified as toxic for reproduction.

STOT-single exposure

This product is not classified as toxic to specific target organs through single exposure.

STOT-repeated exposure

This product is not classified as toxic to specific target organs through repeated exposure.

Aspiration hazard

This product is not classified as hazardous with aspiration.

Other information

No additional information available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

The product is not classified as environmentally hazardous.

Information on ingredients:

Cellulase

LC50 (96 h, Fish) > 39,5 mg/l (OECD 203)

EC50 (48 h, Daphnia sp.) > 39,5 mg/l (OECD 202)

12.2 Persistence and degradability

No information available for the product.

Information on ingredients:

Cellulase: readily biodegradable

12.3 Bioaccumulative potential

No additional information available.

12.4 Mobility in soil

No additional information available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

The product is not hazardous waste. Do not allow into drains, sewers or water courses.

Dispose of contents/container in accordance with local regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2 UN proper shipping name

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Trade name: UPM cellulase enzyme

Date: 15 January 2016

Former date: -

- 14.3 Transport hazard class(es)**
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- 14.4 Packing group**
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- 14.5 Environmental hazards**
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- 14.6 Special precautions for user**
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- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
Not applicable.

SECTION 15: REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No specific regulations/legislation.
- 15.2 Chemical safety assessment**
No chemical safety assessment has been carried out for the product.

SECTION 16: OTHER INFORMATION

Changes to previous version
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Glossary of abbreviations

EC50: Effective concentration: concentration that kills or makes immobilized 50% of the test organisms

LC50: Lethal concentration: concentration that kills 50% of the test organisms

LD50: Lethal dose: dose lethal to 50% of the test organisms

References

SDSs of the ingredients/components

Information of the product composition

Procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Calculation method.

List of relevant R and S phrases or hazard and precautionary statements

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

Training appropriate for workers

Read the instructions in this SDS.