

Date: 4 March, 2021

Former date: 18 July, 2019

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

Trade name

**GrowDase™**

Company product code

**900 102 001, 900 102 002****1.2 Relevant identified uses of the substance or mixture and uses advised against****The uses of the chemical**

Degradation of cellulose.

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

UPM-Kymmene Corporation

<b>Street address</b>	Alvar Aallon katu 1
<b>Postcode and post office</b>	FI-00100, Helsinki
<b>Post-office box</b>	P.O. Box 380
<b>Postcode and post office</b>	FI-00101, Helsinki
<b>Telephone number</b>	+358 20 41 51 11
<b>E-mail address</b>	biomedicals@upm.com
<b>Finnish Business ID (Y code)</b>	1041090-0

**1.4 Emergency information**

The general emergency number 112

Poison Information centre (in Finland), open 24 h daily

P.O. Box 790 (Tukholmankatu 17)

00029 HUS

tel. +358 9 471977 or 0800 147 111

**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.

**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 - 0,5 %	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, CO<sub>2</sub>) 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 spill 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**

<b>Appearance</b>	Liquid.
<b>Odour</b>	Not determined.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not determined.
<b>Melting point/freezing point</b>	Not determined.
<b>Initial boiling point and boiling range</b>	Not determined.
<b>Flash point</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not determined.
<b>Upper/lower flammability or explosive limits</b>	Not determined.

<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Solubility(ies)</b>	Miscible with water
<b>Partition coefficient: n-octanol/water</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined.
<b>Decomposition temperature</b>	Not determined.
<b>Viscosity</b>	Not determined.
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	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 acutely 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.
- 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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**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.

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**SECTION 15: REGULATORY INFORMATION**

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- 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.

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**SECTION 16: OTHER INFORMATION**

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**Changes to previous version**

15 January, 2016: MSDS amended  
04 May, 2017: MSDS amended  
18 July, 2019: MSDS amended

**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.