

Section 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

- 1.1 **Product identifier: ZYME**
- 1.1.1 **Substances**
- 1.1.2 **Other means of identification: N/A**
- 1.2 **Relevant identified uses of the substance or mixture and uses advised against**
- 1.2.1 **Relevant identified uses:**
Auxiliary soil and plant substance intended to be used for influencing soil, plant growth, and crop or plant quality in soil, soilless, coco coir, hydroponic or any other growing media applications.
- 1.2.2 **Uses advised against:**
N/A
- 1.3 **Details of the supplier of the safety data sheet:**
Supplier:
Green Planet
15374 – 103A Ave.
Surrey, BC
Canada
V3R 7A2
Tel: (604)-580-1287 Fax: (604)-580-2375
E-Mail : info@mygreenplanet.com
- 1.4 **EMERGENCY TELEPHONE NUMBER: 1-866-913-4769**

Section 2: HAZARD IDENTIFICATION

- 2.1. **Classification of the substance or mixture:**

<i>Classification</i>
Resp. Sens. 1

- 2.2 **Label elements**
Hazard pictograms:



GHS08

Signal word:

Danger

Hazard statements:

H334 May Cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements:

P261 Avoid breathing vapor or dust.

P285 In case of inadequate ventilation wear respiratory protection.

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

P501 Disposal of contents/container in accordance with national and international regulations.



2.3 Other hazards

DUST: May form combustible dust concentrations in the air.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of overexposure for this product are by contact with skin, eyes or inhalation.

ACUTE:

INHALATION: May cause mechanical irritation.

CONTACT WITH SKIN: Exposure may cause mild skin irritation.

EYE CONTACT: Contact can cause eye irritation.

INGESTION: Ingestion of large quantities may cause abdominal cramps, nausea, vomiting, diarrhea.

Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS**3.1 Mixtures****3.1.1 Description of the mixture:**

Powdered blend of β -Glucanase

3.1.2 Ingredients:

Substance name	CAS No.	INDEX No.	EC No.	Concentration	Classification
β -Glucanase	9074-98-0		263-979-7	>90%	Category 1: Respiratory sensitizer and irritant

3.1.3 Additional information:

This mixture does not contain further substances fulfilling the criteria of hazard class acute toxicity according to CLP regulation.

Section 4: FIRST AID MEASURES**4.1 Description of first aid measures****4.1.1 Following inhalation:**

If breathing becomes difficult, move the person to fresh air. If not breathing, or breathing becomes irregular, provide artificial respiration or oxygen by trained personal. Seek medical attention if allergic response exhibited.

4.1.2. Following skin contact:

Rinse the affected area with plenty of water. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before reuse.

4.1.3. Following eye contact:

If product enters the eyes, open eyes while under gentle running water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Seek medical attention if irritation persists.

4.1.4 Following ingestion:

Wash out mouth with plenty of water. Give large quantities of water. Do not induce vomiting unless instructed to do so by medical personal. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Irritation to eyes, skin and respiratory tract.



Section 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media: Fire can be extinguished with water, carbon dioxide, powder or foam. Use extinguishing media appropriate for the surrounding fire.

Unsuitable extinguishing media: None are known.

5.2 Special hazards arising from the substance or mixture:

Hazardous combustion products: Oxides of carbon, oxides of nitrogen.

5.3 Advice for fire-fighters:

Wear appropriate protective equipment and a Self-Containing Breathing Apparatus (SCBA). Isolate the materials not yet involved in the fire and protect personal. Move the containers from the fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:

Protective equipment: Wear safety glasses, use an appropriate respirator when ventilation is inadequate, wear chemical resistant gloves before handling the product.

Emergency procedures: Do not touch or walk through spilled material without suitable training.

6.1.2 For emergency responders:

Personal protective equipment: For complete personal protection, see section 8.

6.2 Environmental precautions

If possible, prevent entry into sewers, storm drains, surface waters, and soils. If contamination occurs, inform the relevant authorities if the product has caused environmental pollution. Removal by mechanical means (i.e. vacuuming with HEPA filters) preferred. Solids may be placed into appropriate containers for disposal.

6.3 Methods and material for containment and cleaning up

6.3.1 For containment:

Stop leaks if possible without risk. Move containers away from spill area. Cover drains, storm, and sewer entrances.

6.3.2 For cleaning up:

Spilled liquid should be removed immediately as to avoid formation of dust from dried preparation. Sweep or vacuum (equipped with a HEPA filter) the liquid and dispose in accordance with local waste disposal regulations. Removal by mechanical means (i.e. vacuuming with HEPA filters) preferred. Solids may be placed into appropriate containers for disposal. Rinse the area with water and mop up the remainder of the residue. **DO NOT USE BLEACH.**

6.4 Reference to other sections:

See "Section 8" for a complete list of protective equipment.

Section 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protective measures:

To prevent skin and eye contact, wear appropriate protective clothing and safety eye ware. Avoid spills and keep away from drains. Keep the container tightly closed when not in use.

7.1.2 Advice on general occupational hygiene:

Do not eat, drink or smoke when handling the material. Wash hands and face after handling the material. Remove contaminated clothing and personal protective equipment.



7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep the container tightly closed, in a well ventilated area, away from direct sources of heat or ignition. Do not store in direct sunlight. Keep between 0-35 °C (32-95 °F). Do not store unlabelled containers. Do not store opened containers on its side.

Requirements for storage rooms and vessels:

Ambient temperature, humidity and pressure.

7.3 Specific end uses:

Recommendations: powdered fertilizer for hydroponic, soilless, soil and coco coir media.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational exposure limits:

No national limit values established for β-Glucanase.

Limit value type (country of origin)	Substance name	EC-No.	CAS-No.	Occupational exposure limit value		Monitoring and observation processes	Peak limitation	Source
				Long term	Short term			
ppm (USA-OSHA)	Dust, inhalable			15 mg/m ³			N/A	GESTIS

8.1.2 Exposure limits at intended use:

None available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

Sufficient ventilation should always be provided to control worker exposure to airborne contaminants.

8.2.2 Personal protective equipment:

8.2.2.1 Eye / Face protection:

Suitable eye protection: Safety goggles or safety glasses.

Other eye protection measures: Face shield if sufficient risk of splashing is present. Refer to U.S. OSHA 29 CFR 1910.133 or the European Standard EN166.

8.2.2.2 Skin protection:

Hand protection: Chemical resistant neoprene or polyvinyl alcohol gloves.

Body protection: Use body protection appropriate for the task. Do not wear sandals, shorts, or cut of t-shirts.

Other skin protection measures: If deemed necessary, refer to U.S. OSHA 29 CFR 1910.136/138, or the European Standard DIN EN 374

8.2.2.3 Respiratory protection:

Not required in properly ventilated areas.

8.2.2.4 Thermal hazards

None applicable.

8.2.3 Environmental exposure controls:

Refer to "Section 6" for environmental containment and clean up.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

9.1.1 Appearance

Physical state: Solid

Colour: Tan to cream

Odour: Odourless

	value	temperature	pressure
<i>pH</i>	4.5		Ambient
<i>Melting point/freezing point</i>	N/A		Ambient
<i>Initial boiling point/boiling range</i>	N/A		Ambient
<i>Flash point</i>		Not Available	
<i>Evaporation rate</i>		Not Applicable	
<i>Flammability (solid, gas)</i>		Not Available	
<i>Upper/lower flammability or explosive limits</i>		Not Available	
<i>Upper explosive limits</i>		Not Available	
<i>Lower explosive limits</i>		Not Available	
<i>Vapour pressure</i>		Not Applicable	
<i>Vapour density</i>		Not Applicable	
<i>Relative density</i>	N/A		Ambient
<i>Solubility(ies)</i>		Complete in water	
<i>Partition coefficient: n-octanol/water</i>		Not available	
<i>Auto-ignition temperature</i>		Not available	
<i>Decomposition temperature</i>		Not available	
<i>Viscosity</i>		Not Applicable	
<i>Viscosity, dynamic</i>		Not Applicable	
<i>Viscosity, cinematic</i>		Not Applicable	
<i>Explosive properties</i>		Not considered explosive	
<i>Oxidising properties</i>		Not considered an oxidizer	

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive.

10.2 Chemical stability

No hazardous reactions when handled and stored according to provisions.

10.3 Possibility of hazardous reactions

None are known.

10.4 Conditions to avoid:

Freezing. High humidity. High temperatures.

10.5 Incompatible materials:

None are known.

10.6 Hazardous decomposition products:

No known hazardous decomposition products.



Section 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****11.1.1 Mixture****Acute toxicity**

Ingestion of this material is not known to result in significant adverse effects. e.g. Oral toxicity (rats): LD50 > 2.4 g/kg/bw/day, NOAEL.

Skin corrosion/irritation

Practical experience / human evidence: May cause mild skin irritation.

Assessment / Classification: Not Classified

Eye damage/irritation

Practical experience / human evidence: May cause eye irritation.

Assessment / Classification: Not Classified

Sensitization to the respiratory tract/skin

Overexposure by inhalation may cause sensitization and allergic response in hypersensitive individuals; not a skin sensitizer.

Sensitization to the respiratory tract

Overexposure by inhalation may cause sensitization and allergic response in hypersensitive individuals; not a skin sensitizer.

Skin sensitization

Based on available data, the classification criteria are not met.

CMR effects (carcinogenic, mutagenicity and toxicity for reproduction)**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Overall assessment on CMR properties:

Ingredients within this product are not found on the following lists: OSHA Subpart Z, EPA IRIS, IARC, NTP, CalEPA; and therefore are not considered to be, nor suspected to be, cancer causing by these agencies.

Specific target organ toxicity (single exposure)**STOT SE 1 and 2**

Based on available data, the classification criteria are not met.

STOT SE 3**Irritation to respiratory tract:**

See respiratory sensitization.

Narcotic effects

Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)**STOT RE 1 and 2**

Based on available data, the classification criteria are not met.

Aspiration hazard

See respiratory sensitization.



Section 12: ECOLOGICAL INFORMATION**12.1 Toxicity:**

Not significantly ecotoxic

12.2 Persistence and degradability**Biodegradation:****Assessment / Classification:**

Readily biodegradable (according to OECD Guideline 302B). Enzymes are known to be fully biodegradable.

12.3 Bioaccumulative potential**Assessment / Classification:**

The product completely dissociates in water. Based on physicochemical properties (high water solubility), the product has a low potential for bioaccumulation.

12.4 Mobility in soil**Assessment / Classification:**

The product has a low potential for adsorption. Portion not taken up by the plants, can leach into ground water.

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

Section 13: DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****13.1.1 Product / Packaging disposal:**

Disposal should be in accordance with applicable federal and state laws.

13.1.2 Other disposal recommendations:

Agricultural producers disposing of waste from their own use are exempt from hazardous waste requirements as long as (1) they triple rinse the emptied containers in accordance with the labeling to facilitate removal of the chemical from the container, and (2) they dispose of the residue on their own agricultural establishment in a manner consistent with the disposal instructions in accordance with the federal and state laws.

13.2 Additional information:

Irrigation return flows are not considered hazardous waste.

The product is not listed as dangerous waste in the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

The product does not have an EPA Hazardous Waste Number.



Section 14: TRANSPORT INFORMATION

	Land transport (ADR/RID)	Inland waterway transport (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN No.	Non dangerous good			
14.2 UN Proper shipping name	Not applicable			
14.3 Transport hazard class(es)	Not applicable			
Hazard label(s)	Not applicable			
14.4 Packing group	Not applicable			
14.5 Environmental hazards	Not applicable			

14.6 Special precautions for user: None

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

14.8 Additional information

14.8.1 All transport carriers

14.8.2 Land transport (ADR/RID)

Limited quantity: Not applicable

Special provisions: None

Tunnel restriction code: Not applicable

Classification code: Not applicable

Transport category: Not applicable

Hazard identification number (Kemler No.): Not applicable

Remark: Non dangerous good

14.8.3 Inland waterway transport (ADN)

Limited quantity: Not applicable

Special provisions: None

Category: Not applicable

Remark: Non dangerous good

14.8.4 Sea transport (IMDG)

Limited quantity: Not applicable

Special provisions: None

Marine pollutant: No

Segregation group: Not applicable

Remark: Non dangerous good

14.8.5 Air transport (ICAO-TI / IATA-DGR)

Limited quantity: Not applicable

Special provisions: None

Remark: Non dangerous good



Section 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the mixture****15.1.1 US Federal****SARA Title III Rules****Section 313 Toxic Chemicals**

This product does not contain any chemicals which are subject to reporting requirements of the Act and 40 CFR Part 372.

Section 311/312 Hazard Classes

Acute Health Hazard: None

Chronic Health Hazard: None

Fire Hazard: None

Release of Pressure: None

Reactive Hazard: None

15.1.2 US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

15.1.3 Canada**WHIMIS Classification**

Not classified

This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

15.1.4 European Union**Classification according to the Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Not classified as hazardous.

15.2 Chemical Safety Assessment:

For this substance a chemical safety assessment is not required.

Section 16: OTHER INFORMATION**16.1 Indication of changes**

Version No.: 1.1 - 03/12/2015

16.2 Disclaimer:

The information provided on this SDS is believed to be accurate to the best of our knowledge, but is not warranted to be so. The information provided is intended to present guidance for safe handling, use, processing, storage, transport, disposal, and discharge; it is not intended to be a guarantee or quality specification. Green Planet LLC assumes no responsibility for injury to vendee or third party person proximately caused by the material if safety procedure are not adhered to as stipulated in the SDS. Furthermore, Green Planet LLC assumes no responsibility for injury caused by abnormal use of the product even if reasonable safety procedures are followed. It is the responsibility of the recipient of this SDS to ensure that information given here is read and understood by all who use, handle, dispose of, or in any way come in contact with the product.

