

# PLAGRON

## SAFETY DATA SHEET

### Pure Zym

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

#### 1. Identification

##### Product identifier

Product name	Pure Zym
appearance	Liquid.
Product number	pure zym v02.3.0
Internal identification	A30676
Container size	100 mL - 20 L 0.0264 gal - 5.28 gal

##### Recommended use of the chemical and restrictions on use

Application	Soil improver
Uses advised against	Use only for intended applications.

##### Details of the supplier of the safety data sheet

Supplier	Bertels B.V. Ommelpad 2 6035 PC Ospel The Netherlands www.plagron.com ☎ +31 (0)495 63 15 59 ✉ msds@bertelsholland.com
----------	---

##### Emergency telephone number

Emergency telephone	+31 (0)6 51 66 52 10 +31 (0)6 27 84 19 52
---------------------	--

#### 2. Hazard(s) identification

##### Classification of the substance or mixture

Physical hazards	Not Classified
Health hazards	Resp. Sens. 1 - H334
Environmental hazards	Not Classified

##### Label elements

##### Hazard symbols



Signal word	Danger
Hazard statements	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

## Pure Zym

<b>Precautionary statements</b>	P102 Keep out of reach of children. P261 Avoid breathing vapor/ spray. P284 In case of inadequate ventilation wear respiratory protection. P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing. P342+P311 If experiencing respiratory symptoms: Call a poison center/ doctor. P501 Dispose of contents/ container in accordance with national regulations.
---------------------------------	---

**Contains** cellulase

### Other hazards

This product does not contain any substances classified as PBT or vPvB.

### 3. Composition/information on ingredients

#### Mixtures

<b>cellulase</b>	<b>&lt;1%</b>
CAS number: 9012-54-8	
<b>Classification</b>	
Resp. Sens. 1 - H334	

The full text for all hazard statements is displayed in Section 16.

### 4. First-aid measures

#### Description of first aid measures

<b>General information</b>	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. Rinse nose and mouth with water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms are severe or persist. In the event of any sensitization symptoms developing, ensure further exposure is avoided.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
<b>Skin Contact</b>	Rinse with water.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

#### Most important symptoms and effects, both acute and delayed

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	May cause sensitization or allergic reactions in sensitive individuals.
<b>Ingestion</b>	No specific symptoms known.
<b>Skin contact</b>	No specific symptoms known.
<b>Eye contact</b>	No specific symptoms known. May be slightly irritating to eyes.

#### Indication of immediate medical attention and special treatment needed

**Notes for the doctor** Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.

## Pure Zym

### 5. Fire-fighting measures

#### Extinguishing media

**Suitable extinguishing media** The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

#### Special hazards arising from the substance or mixture

**Specific hazards** Containers can burst violently or explode when heated, due to excessive pressure build-up.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances:  
Harmful gases or vapors.

#### Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of vapors and spray/mists. Use suitable respiratory protection if ventilation is inadequate.

#### Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground.

#### Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. The contaminated absorbent may pose the same hazard as the spilled material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

## Pure Zym

**Usage precautions** Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage precautions** Store at temperatures between 5°C/41°F and 35°C/95°F. Protect from freezing and direct sunlight. Store in tightly-closed, original container. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Keep containers upright. Protect containers from damage. Store away from incompatible materials (see Section 10).

**Storage class** Chemical storage.

### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

## 8. Exposure controls/Personal protection

### Exposure controls

**Appropriate engineering controls** Provide adequate ventilation.

**Eye/face protection** Avoid contact with eyes. Large Spillages: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.

**Hand protection** No specific hand protection recommended.

**Hygiene measures** Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

**Respiratory protection** No specific recommendations. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.

**Environmental exposure controls** Keep container tightly sealed when not in use. Avoid release to the environment.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** Clear liquid.

**Color** Yellow. to Brown.

**Odor** Characteristic.

**Odor threshold** No information available.

**pH** pH (concentrated solution): 5.2 - 6.3

**Melting point** No information available.

**Initial boiling point and range** No information available.

**Flash point** No information available.

**Evaporation rate** No information available.

## Pure Zym

<b>Flammability (solid, gas)</b>	No information available.
<b>Upper/lower flammability or explosive limits</b>	No information available.
<b>Vapor pressure</b>	No information available.
<b>Vapor density</b>	No information available.
<b>Relative density</b>	1.08 - 1.10 g/ml
<b>Solubility(ies)</b>	Completely soluble in water.
<b>Partition coefficient</b>	No information available.
<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition Temperature</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Explosive properties</b>	Not applicable.
<b>Oxidizing properties</b>	Not applicable.

### 10. Stability and reactivity

<b>Reactivity</b>	See the other subsections of this section for further details.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	No potentially hazardous reactions known.
<b>Conditions to avoid</b>	There are no known conditions that are likely to result in a hazardous situation.
<b>Materials to avoid</b>	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
<b>Hazardous decomposition products</b>	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

### 11. Toxicological information

#### Information on toxicological effects

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** Based on available data the classification criteria are not met.

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met.

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.

##### Skin corrosion/irritation

**Animal data** Based on available data the classification criteria are not met.

##### Serious eye damage/irritation

**Serious eye damage/irritation** Based on available data the classification criteria are not met.

##### Respiratory sensitization

## Pure Zym

<b>Respiratory sensitization</b>	There is evidence that the product can cause respiratory hypersensitivity.
<b><u>Skin sensitization</u></b>	
<b>Skin sensitization</b>	Based on available data the classification criteria are not met.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Based on available data the classification criteria are not met.
<b>IARC carcinogenicity</b>	None of the ingredients are listed or exempt.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Not classified as a specific target organ toxicant after a single exposure.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Not classified as a specific target organ toxicant after repeated exposure.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.
<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	May cause sensitization or allergic reactions in sensitive individuals.
<b>Ingestion</b>	No specific symptoms known.
<b>Skin Contact</b>	No specific symptoms known.
<b>Eye contact</b>	No specific symptoms known.
<b>Route of exposure</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target Organs</b>	No specific target organs known.

### 12. Ecological information

<b>Ecotoxicity</b>	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
<b>Toxicity</b>	Based on available data the classification criteria are not met.
<b><u>Persistence and degradability</u></b>	
<b>Persistence and degradability</b>	The product is biodegradable.
<b><u>Bioaccumulative potential</u></b>	
<b>Bio-Accumulative Potential</b>	No data available on bioaccumulation.
<b>Partition coefficient</b>	No information available.
<b><u>Mobility in soil</u></b>	
<b>Mobility</b>	The product is water-soluble and may spread in water systems. The product is non-volatile.

## Pure Zym

### Other adverse effects

**Other adverse effects** None known.

### 13. Disposal considerations

#### Waste treatment methods

##### **General information**

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

##### **Disposal methods**

Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### 14. Transport information

#### UN Number

**UN No. (DOT)** Not applicable.

#### UN proper shipping name

**Proper shipping name (DOT)** Not applicable.

#### Transport hazard class(es)

##### **DOT transport labels**

No transport warning sign required.

#### Packing group

**DOT packing group** Not applicable.

#### Special precautions for user

**DOT reportable quantity** Not applicable.

**DOT TIH Zone** Not applicable.

### 15. Regulatory information

#### US Federal Regulations

##### **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed or exempt.

##### **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

None of the ingredients are listed or exempt.

##### **SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None of the ingredients are listed or exempt.

##### **SARA 313 Emission Reporting**

None of the ingredients are listed or exempt.

##### **CAA Accidental Release Prevention**

None of the ingredients are listed or exempt.

##### **FDA - Essential Chemical**

None of the ingredients are listed or exempt.

## Pure Zym

### **FDA - Precursor Chemical**

None of the ingredients are listed or exempt.

### **SARA (311/312) Hazard Categories**

None of the ingredients are listed or exempt.

### **OSHA Highly Hazardous Chemicals**

None of the ingredients are listed or exempt.

### **US State Regulations**

#### **California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are listed or exempt.

#### **California Air Toxics "Hot Spots" (A-I)**

None of the ingredients are listed or exempt.

#### **California Air Toxics "Hot Spots" (A-II)**

None of the ingredients are listed or exempt.

#### **California Directors List of Hazardous Substances**

None of the ingredients are listed or exempt.

#### **Massachusetts "Right To Know" List**

None of the ingredients are listed or exempt.

#### **Rhode Island "Right To Know" List**

None of the ingredients are listed or exempt.

#### **Minnesota "Right To Know" List**

None of the ingredients are listed or exempt.

#### **New Jersey "Right To Know" List**

None of the ingredients are listed or exempt.

#### **Pennsylvania "Right To Know" List**

None of the ingredients are listed or exempt.

### **Inventories**

#### **US - TSCA**

The following ingredients are listed or exempt:

*cellulase*

*1,2-benzisothiazol-3(2H)-one*

*bronopol (INN)*

*Beta-glucanase (endo-1,3(4)-)*

#### **US - TSCA 12(b) Export Notification**

None of the ingredients are listed or exempt.

### **16. Other information**



## Pure Zym

<b>Abbreviations and acronyms used in the safety data sheet</b>	<p>TDG: The transport of dangerous goods act</p> <p>IATA: International air transport association.</p> <p>ICAO: Technical instructions for the safe transport of dangerous goods by air.</p> <p>IMDG: International maritime dangerous goods.</p> <p>CAS: Chemical abstracts service.</p> <p>ATE: Acute toxicity estimate.</p> <p>LC<sub>50</sub>: Lethal concentration to 50 % of a test population.</p> <p>LD<sub>50</sub>: Lethal dose to 50% of a test population (median lethal dose).</p> <p>EC<sub>50</sub>: 50% of maximal effective concentration.</p> <p>PBT: Persistent, bioaccumulative and toxic substance.</p> <p>vPvB: Very persistent and very bioaccumulative.</p>
<b>Classification abbreviations and acronyms</b>	Resp. Sens. = Respiratory sensitisation
<b>Training advice</b>	Read and follow manufacturer's recommendations.
<b>Revision comments</b>	This is the first issue.
<b>Revision date</b>	3/19/2019
<b>Revision</b>	02.3.0
<b>SDS No.</b>	4753
<b>Hazard statements in full</b>	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.