



TRM Biologics 888-212 1390

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Below is the safety data sheet for both the Bio-Zyme liquid and powder by the independent testing lab, Tender Living Care, 15752 Industrial Parkway, Cleveland, OH 44135, 1-216-472-3030.



SAFETY DATA SHEET Bio-Zyme Powder

Issuing Date 01-Jan-2017 Revision Date 12-May-2017 Revision Number 2

SAFETY DATA SHEET Bio-Zyme Powder

Issuing Date 01-Jan-2017 Revision Date 12-May-2017 Revision Number 2

Product identifier

Product Identifier: Bio-Zyme Powder

Product form: Powdered mixture of beneficial bacteria

Substance name: Natural Probiotic

CAS No.: 68920-42-3, mixture of non-toxic, non-pathogenic Bacillus bacteria

Formula: N/A

Synonyms: Beneficial Bacteria, Probiotic

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Lake treatment for reducing sediment and excess N and P

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name TLC Products

Supplier Address 15752 Industrial Parkway

Cleveland

OH

44135

US

Supplier Phone Number Phone:2164723030

Fax: 2164723031

Supplier Email johnmwong@tlc-products.com

Emergency telephone number

Company Emergency Phone

Number

2164723030

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

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Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS Label elements, including precautionary statements



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Emergency Overview

Precautionary Statements - Prevention

None

Precautionary Statements - Response

None

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

None

Hazards not otherwise classified (HNOC)

Not applicable

Toxicity

100 % of the mixture consists of non-toxic ingredient(s)

Other information

May cause slight eye irritation

Interactions with Other Chemicals

No information available.

The product contains no substances which at their given concentration, are considered to be hazardous to health

First aid measures

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin contact Wash with soap and water.

2. HAZARDS IDENTIFICATION

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance Tan Physical state Powder(s) Solid Odor Slight

3. COMPOSITION/INFORMATION ON INGREDIENTS

4. FIRST AID MEASURES

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Inhalation Remove to fresh air.

Ingestion Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects **No information available.**

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Uniform Fire Code COMBUSTIBLE DUST/POWDER

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes.

Environmental precautions



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Environmental precautions Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

5. FIRE-FIGHTING MEASURES

6. ACCIDENTAL RELEASE MEASURES

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Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed.

Incompatible Products None known based on information supplied.

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Measures Showers

Eyewash stations

Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Physical and Chemical Properties

Physical state Powder(s), Solid

Appearance Tan Odor Slight

Color No information available Odor Threshold No information available

Property Values Remarks Method

pH No data available None known

Melting / freezing point No data available None known

Boiling point / boiling range No data available None known

Flash Point No data available None known

Evaporation Rate No data available None known

Flammability (solid, gas) No data available

Flammability Limit in Air

Upper flammability limit No data available

None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

9. PHYSICAL AND CHEMICAL PROPERTIES

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Lower flammability limit No data available

Vapor pressure

Vapor density

No data available

No data available

None known

None known

Specific Gravity No data available None known



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Water Solubility Mostly soluble None known
Solubility in other solvents No data available None known
Partition coefficient: n-octanol/water No data available None known
Autoignition temperature No data available None known
Decomposition temperature No data available
Kinematic viscosity No data available
Dynamic viscosity No data available
Explosive properties No data available
Oxidizing properties No data available
Other Information
None known
None known
None known
Softening Point No data available
VOC Content (%) No data available
Particle Size No data available
Particle Size Distribution
Reactivity
No data available.
Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
None under normal processing.
Hazardous Polymerization
Hazardous polymerization does not occur.
Conditions to avoid
None known based on information supplied.
Incompatible materials
None known based on information supplied.
Hazardous Decomposition Products
Carbon oxides.
Information on likely routes of exposure
Product Information .
Inhalation Specific test data for the substance or mixture is not available.
Eye contact Specific test data for the substance or mixture is not available.
Skin contact Specific test data for the substance or mixture is not available.
Ingestion Specific test data for the substance or mixture is not available.

10. STABILITY AND REACTIVITY

11. TOXICOLOGICAL INFORMATION

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Component Information No information available

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity No known effect based on information supplied.

Target Organ Effects None known.

Aspiration Hazard No information available.



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Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

Not applicable

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Other adverse effects

No information available.

12. ECOLOGICAL INFORMATION

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Waste treatment methods

Disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

DOT NOT REGULATED

Proper Shipping Name NON REGULATED

Hazard Class N/A

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

Proper Shipping Name NON REGULATED

Hazard Class N/A

IMDG/IMO Not regulated

Hazard Class N/A

RID Not regulated

ADR Not regulated

ADN Not regulated

International Inventories

TSCA Complies

DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any

chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

13. DISPOSAL CONSIDERATIONS

14. TRANSPORT INFORMATION

15. REGULATORY INFORMATION

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SARA 311/312 Hazard Categories

Acute Health Hazard No

Chronic Health Hazard No



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Fire Hazard No

Sudden release of pressure hazard No

Reactive Hazard No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

International Regulations

Canada

WHMIS Hazard Class

Not determined

NFPA Health Hazards 1 Flammability 0 Instability 0 Physical and

Chemical Hazards -

HMIS Health Hazards 1 Flammability 0 Physical Hazard 0 Personal Protection

Prepared By TLC Products

15752 Industrial Parkway

Cleveland, OH 44135

1-216-472-3030

Issuing Date 12-May-2016

Revision Date 12-May-2016

Revision Note No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text

End of Safety Data Sheet



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Bio-Zyme Liquid (Aqueous)

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date: 04/22/2017 Supersedes: 01/01/2015 Version: 5.1

Product Identifier: Bio-Zyme Liquid

Product form: Aqueous suspension of beneficial bacteria

Substance name: Natural Probiotic

CAS No.: 68920-42-3, non-toxic Bacillus, Rhodopseudomonas, and Nitrifying bacteria.

Formula: N/A

Synonyms: Beneficial Bacteria, Probiotic

Intended Use Of The Product

Use of the substance/mixture: Added to aquariums, lakes and ponds to reduces organic sludge, reduce excess N and P, also

denitrifies meaning nitrate conversion to nitrogen gas.

Name, Address, And Telephone Of The Responsible Party

TLC Products

15752 Industrial Parkway

Cleveland, OH 44135

216-472-3030

Emergency telephone number

Emergency number : 216-472-3030

Classification of the substance or mixture

GHS-US classification

N/A

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) N/A

Signal word (GHS-US) : N/A

Hazard statements (GHS-US) : N/A

Precautionary statements (GHS-US) : N/A

Other hazards

No additional information available,

Unknown acute toxicity (GHS US)

No data available

Substances

Name Product Identifier % GHS-US classification

Beneficial Bacteria 68920-42-3 < 2% N/A Non

Hazardous

Water 7732-18-5 98% N/A

Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice

(show the label where possible).

First-aid measures after inhalation: N/A



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First-aid measures after skin contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms/injuries: Eye irritation.

Symptoms/injuries after inhalation: N/A

Symptoms/injuries after eye contact: May cause eye irritation.

Symptoms/injuries after ingestion: Ingestion may cause nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

If medical advice is needed, have product container or label at hand.

Extinguishing media

Suitable extinguishing media: N/A

Unsuitable extinguishing media: N/A

Special hazards arising from the substance or mixture

Fire hazard: Non flammable

Explosion hazard: No explosion hazard

Reactivity: Non reactive. Will not polymerize.

Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire.

Protection during firefighting: Firefighters should wear full protective gear. Do not enter fire area without proper protective equipment, including respiratory protection.

Personal precautions, protective equipment and emergency procedures

General measures: Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice.

For non-emergency personnel

Protective equipment: Use appropriate personal protection equipment (PPE).

Emergency procedures: N/A

For emergency responders

Protective equipment: Use appropriate personal protection equipment (PPE).

Emergency procedures: Ventilate area.

Environmental precautions

Dispose down entry to sewers and public waters.

Methods and material for containment and cleaning up

For containment: Store at room temperature.

Methods for cleaning up: Clear up spills immediately and dispose of waste safely.

Reference to other sections

See heading 8, Exposure Controls and Personal Protection.

Precautions for safe handling

Additional hazards when processed: None

Precautions for safe handling: None

Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed

areas with mild soap and water before eating, drinking, or smoking and again when leaving work.



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Conditions for safe storage, including any incompatibilities

Technical measures: None

Storage conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible products: N/A

Incompatible materials: N/A

Storage area: Any storage room, away from children

Special rules on packaging: None

Specific end use(s)

Lake and pond treatment for improved clarity, reduced odor, and reduced organic sludge

Control parameters

Beneficial Bacteria 68920-42-3

USA ACGIH ACGIH TWA (ppm) N/A

USA NIOSH NIOSH REL (TWA) (mg/m3) N/A

USA IDLH US IDLH (ppm) N/A

USA OSHA OSHA PEL (TWA) (mg/m3) N/A

USA OSHA OSHA PEL (TWA) (ppm) N/A

Exposure controls

Appropriate engineering controls : Ensure all national/local regulations are observed.

Personal protective equipment : Protective goggles. Gloves.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : N/A

Respiratory protection : N/A

Thermal hazard protection : N/A

Other information : N/A

Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Amber suspension of bacteria in

Color : Amber

Odor : Musty

Odor threshold : No data available

pH : 6.0 to 8.5

Relative evaporation rate (butylacetate=1) : Water

Melting point : N/A

Freezing point : 0 C (water)

Boiling point : 100 C (water)

Flash Point : N/A

Auto-ignition temperature : N/A

Decomposition Temperature : Will not decompose

Flammability (solid, gas) : Not flammable

Vapor pressure : Water

Relative vapour density at 20 °C : Water

Relative density : Water

Density : Water

Solubility : Miscible.

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : Water



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Viscosity, dynamic : Water
Explosive properties : No data available
Oxidizing properties : No data available
Explosive limits : Not applicable
Other information
No additional information available

Reactivity Will not react.
Chemical Stability Stable, will not polymerize.
Possibility Of Hazardous Reactions No known hazardous reactions.

Conditions To Avoid Do not freeze, store below 95 F, preferably store at room temperature.
Incompatible Materials None.
Hazardous Decomposition Products None.

Information on toxicological effects

Acute toxicity : Not classified
Beneficial Bacteria 68920-42-3
LD50 oral rat Unknown, not toxic
LD50 dermal rabbit Unknown, not toxic
LC50 inhalation rat (mg/l) Unknown, not toxic
Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Mild eye irritant
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: None
Carcinogenicity: None
Reproductive toxicity: None
Specific target organ toxicity (single exposure): None
Specific target organ toxicity (repeated exposure): None
Aspiration hazard: None
Symptoms/injuries after inhalation: May cause drowsiness or dizziness.
Symptoms/injuries after eye contact: Causes serious eye irritation.
Symptoms/injuries after ingestion: Ingestion may cause nausea, vomiting and diarrhea.

Toxicity

Beneficial Bacteria 68920-42-3
LC50 fishes 1 None, not toxic
EC50 Daphnia 1 None, not toxic
LC50 fish 2 None, not toxic
EC50 Daphnia 2 None, not toxic
Persistence and degradability
Beneficial Bacteria 68920-42-3
Persistence and degradability Readily biodegradable in water. Not established.
Bioaccumulative potential
Beneficial Bacteria 68920-42-3
BCF fish 1 None
Log Kow N/A
Bioaccumulative potential Not established.
Mobility in soil
No additional information available



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Other adverse effects

Other information : May dispose of waste material

Waste treatment methods

Regional legislation (waste): U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII. U.S. - RCRA

(Resource Conservation & Recovery Act) - Constituents for Detection Monitoring. U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents. U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards. U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring.

U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics.

Waste disposal recommendations: May dispose down drain, sewer, or pour into lake or pond. No hazardous disposal problems or risks.

Additional information: Dispose of empty containers in recycle or waste bins.

In accordance with ICAO/IATA/DOT/TDG

UN number

UN-No.(DOT) : N/A

DOT NA no. N/A

UN proper shipping name

Department of Transportation (DOT)

Hazard Classes: N/A

Hazard labels (DOT) : Non hazardous

Packing group (DOT) : No danger

DOT Special Provisions (49 CFR 172.102) : N/A

DOT Packaging Exceptions (49 CFR

173.xxx): N/A

DOT Packaging Non Bulk (49 CFR

173.xxx): N/A

DOT Packaging Bulk (49 CFR 173.xxx) : N/A

Additional information

Emergency Response Guide (ERG)

Number: N/A

Other information : No supplementary information available.

Transport by sea

DOT Vessel Stowage Location : No limits or special considerations. Non hazardous, non corrosive, non explosive, will not polymerize, no vapors.

MFAG-No. : N/A

Air transport

DOT Quantity Limitations Passenger

aircraft/rail (49 CFR 173.27)

: N/A

DOT Quantity Limitations Cargo aircraft

only (49 CFR 175.75): N/A



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US Federal regulations

Beneficial Bacteria 68920-42-3

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag None

US State regulations

Beneficial Bacteria 68920-42-3

State or local regulations None, N/A

Indication of changes : October 15, 2015

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

None N/A

NFPA health hazard : None

NFPA fire hazard : None

NFPA reactivity : None

HMIS III Rating

Health : 0 Minimal Hazard

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. SDS US (GHS HazCom) - US

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