Issue Date: 03/13/18 Version: 2.0

SAFETY DATA SHEET FORM

Product Identifier: Section 1 - PRODUCT and COMPANY IDENTIFICATION MicroEssentials Oenos

1.1 Product Identifier

Product Name: MicroEssentials Oenos Product Code(s): ME-OENOS Chemical Name: Mixture Synonyms: NA

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

Intended Product Use: Nutrient blend for malolactic bacteria. This product is used during malolactic fermentation in wine.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Distributor: Gusmer Enterprises, Inc.

Postal Address: 81 M Street, Fresno, CA 93721 USA 1401 Ware Street, Waupaca, WI 54981 USA Telephone Number: (01)(559) 485-2692 [USA] (product info) (01)(715) 258-5525 [USA] (product info)

Hours of Operation: Monday - Friday 8:00am-5:00pm PST

Monday - Friday 8:00am-5:00pm CST

1.4 Emergency telephone number Medical Emergency: 911

Chemical Emergency: (800) 424-9300

Section 2 - HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin Irritation (Category 2) Eye Irritation (Category 2B) STOT SE (Category 3)

2.2 Label Elements

Hazard Pictogram(s):



Signal Word: Warning

Hazard Statements:

Causes skin irritation. Causes eye irritation

May cause respiratory irritation.

May form combustible dust concentrations in air.

Precautionary Statements:

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present. Continue

Wash thoroughly after handling. Use in a well ventilated area.

f eye irritation persists: Get medical advice/attention.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If on skin: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

Call a poison center/doctor if you feel unwell. Store in a well ventilated place. Keep container tightly closed.

Store locked up. Dispose of contents/ container to an approved waste disposal plant.

2.3 Emergency Overview

Appearance/Odor: Tan colored powder with yeast like aroma.

Other Hazards: Warning: Inhalation may cause respiratory irritation, breathlessness, coughing, chest tightness, and difficulty breathing. May cause skin irritation on prolonged contact. May cause eye irritation upon direct contact. Excessive ingestion may cause intestinal discomfort (bloating, cramping, diarrhea, etc.)

> Ingredients in this product are identified as flavoring compounds and NIOSH has reported the occurrence of severe lung disease in some workers who make or use flavorings. The mixture has not been tested as a whole. It contains ingredients which could be released from the mixture in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health risk to employees.

Section 3 - COMPOSITION / INFORMATION on INGREDIENTS

The identity of the individual components of this product is proprietary information and is considered a trade secret pursuant to 29 CFR 1910.1200

Ingredient(s) Yeast Derived Ingredients	Common Name & Synonyms NA	Percentage 0-75%	CAS No.
Thiamine HCL	Vitamin B1	<1%	67-03-8
Excipients	NA	0-25%	NA

Section 4 - FIRST AID MEASURES

4.1 Description of the first aid measures

Eye Contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Skin Contact: Immediately wash with water and soap and rinse thoroughly.

In case of unconsciousness, place patient securely on side position for transportation. Ingestion: Give large amounts of water. If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

Eve Contact: May cause irritation. May cause irritation
May cause irritation Skin Contact: Inhalation: Inaestion: May cause intestinal discomfort

Chronic Effects: Not known to produce any long-term effects from continuing exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No special advice, treat symptomatically.

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Section 5 - FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

5.2 Special hazards arising from the substance or mixture

No further relevant information available

5.3 Advice for firefighters

As in any fire, wear NIOSH-approved self contained breathing apparatus and appropriate protective clothing.

Depending on airborne concentration, moisture content, particle diameter, surface area and exposure to an ignition source, airborne dust may ignite and burn with explosive force in a

Section 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.2 Environmental precautions

None, discharge in accordance with federal, state and local laws.

6.3 Methods and materials for containment and cleaning up

If large amounts of dust are generated, collect with vacuum or suppress with water spray and sweep up. Minimize compressed air blowdown or other practices that generate high dust levels.

See Section 8 for appropriate personal protective equipment.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Avoid generating excessive dust. If dust levels are suspected to be over PEL, wear a NIOSH approved N95 or greater respirator. Protect from excessive moisture. Maintain good housekeeping practices. Avoid contact with eyes, skin and clothing. See Section 8 for more information

7.2 Conditions for safe storage, including any incompatibilities

Store in original container or clean, covered container. Store in cool, dry, well-ventilated area. Product should be kept sealed and dry.

See Section 8 for OSHA permissible exposure limit(s)

ection 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

This product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls

Normal Handling Conditions

If necessary use ventilation system to keep airborne dust concentration below permissible exposure limits. Ventilation to control dust should be considered where potential explosive concentrations and ignition sources are present. The design and operation of any exhaust system should consider the possibility of explosive Engineering Controls:

concentrations of dust within the system

Ensure that exhaust ventilation and material transport systems involved in handling this product contain explosion relief vents or suppression systems designed and operated in accordance with applicable standards if the operating conditions justify their use

Respiratory Protection: If dust levels are suspected to be over PEL, wear a NIOSH approved N95 or greater respirator.

Eye Protection: ANSI Z87+ approved dust goggles or safety glasses, if necessary, to avoid eye irritation

Skin Protection: Cover skin with clothing and/or gloves if skin dryness or irritation occurs.

Maintain good housekeeping practices, wash hands after handling, avoid direct eye contact. Clean up areas where dust settles to avoid excessive accumulation of this combustible material. Minimize compressed air blowdown or other practices that generate high airborne-dust concentrations. General Hygiene:

Section 9 - PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State: Powder

Color: Tan colored Odor: Yeast-like aroma Odor Threshold: No Data Available

pH: No Data Available Melting / Freezing
Point (Specify):

No Data Available Initial Boiling Point & Boiling Range: No Data Available

Flash Point: No Data Available

Evaporation Rate: No Data Available Flammability (solid, gas): upper: No Data Available lower: No Data Available

Explosive Limits: LEL: No Data Available UEL: No Data Available Kst: No Data Available Vapor Pressure:

No Data Available Vapor Density: No Data Available Relative Density: No Data Available Solubility(ies): Partially soluble in water Partition Coefficient (n-No Data Available octanol/water): Auto-ignition Temperature: No Data Available Decomposition No Data Available No Data Available Oxidizing Properties:

Viscosity: No Data Available



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Section 10 - STABILITY and REACTIVITY

10.1 Reactivity

No Data Available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None

10.4 Conditions to avoid

Avoid open flame, sparks and other sources of ignition. Avoid humidity

10.5 Incompatible materials

Avoid open flame, sparks and other sources of ignition.

10.6 Hazardous decomposition products

No Data Available

Section 11 - TOXICOLOGY INFORMATION

11.1 Information on toxicological effects

Toxicology Data: The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Skin Corrosion/Irritation: Irritant to skin and mucous membranes.

Serious Eye Damage/Eye

Irritation:

Respiratory or Skin Sensitization:

No sensitizing effects known

STOT - Single Exposure: May cause upper respiratory tract irritation.

STOT - Repeated Exposure: Not known to produce any long-term effects from continuing exposure.

Aspiration Hazard: No Data Available

11.2 Further Information

Mutagenicity: No Data Available Productive Toxicity: No Data Available

Carcinogenicity: Not classified as a carcinogen by OSHA, NTP, or IARC in their reviews.

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Section 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

No Data Available

12.2 Persistence and degradability

No Data Available

12.3 Bioaccumulative potential No Data Available

12.4 Mobility in soil

No Data Available

12.5 Other adverse effects

No Data Available

Section 13 - DISPOSAL CONSIDERATIONS

Substance: Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - TRANSPORTATION INFORMATION

UN Number: Not Applicable Class: Not Applicable

Proper Shipping Name: Not Applicable Packing Group: Not Applicable Marine Pollutant: Not Applicable Other Applicable Not Applicable Information:



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Section 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

TSCA: Listed

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313. SARA 311/312: No SARA Hazards.

California Prop. 65 Components:

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16 - OTHER INFORMATION

Product Number(s): ME-OENOS

Name of Preparer: Eric Anderson Prepared By: Gusmer Enterprises, Inc.

Title: Corporate Safety & Regulatory Manager

Date: 3/13/2018

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GHS Hazard Warning Label

MicroEssentials Oenos



WARNING:

Causes skin and eye irritation. May cause respiratory irritation May form combustible dust concentrations in air.

Avoid breathing dust/fume/gas/mist/vapors/spray. Use in a well ventilated area. If inhaled: Remove person to fresh air and keep comfortable for breathing. Wear protective gloves/protective clothing/eye protection/face protection. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Wash thoroughly after handling.

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> Gusmer Enterprises Inc. 81 M St. Fresno, CA 93721 (559) 485-2692
> CONSULT SDS FOR ADDITIONAL INFORMATION ON HAZARD

V1.0