

SAFETY DATA SHEET

Amaferm[®] Liquid

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union REACH Regulations

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Amaferm[®] Liquid**
PRODUCT NUMBER: 8132 & 8147
PRODUCT DESCRIPTION: This is an animal feed additive.
U.N. NUMBER: None
U.N. DANGEROUS GOODS CLASS: Non-Regulated Material
SUPPLIER/MANUFACTURER'S NAME: **Biozyme[®] Incorporated**
ADDRESS: P.O.Box 4428, 6010 Stockyards Expressway, St. Joseph, MO 64504 USA
EMERGENCY PHONE: 816-238-3326
BUSINESS PHONE: 800-821-3070 (Product Information)
WEB SITE: www.biozymeinc.com
DATE OF PREPARATION: October 22, 2018
DATE OF LAST REVISION: October 17, 2016

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Product Description: This product is a light yellow liquid with a pleasant odor.

Health Hazards: Not expected to cause adverse health effects when used as directed. Prolonged or repeated exposure may cause irritation to eyes and skin.

Flammability Hazards: This product is non-flammable.

Reactivity Hazards: None known.

Environmental Hazards: The environmental effects of this product have not been investigated, however release of a significant amount may have adverse environmental effects.

Emergency Considerations: Emergency responders must wear the proper personal protective equipment (and have appropriate fire-suppression equipment) suitable for the situation to which they are responding.

US DOT SYMBOLS

CANADA (WHMIS) SYMBOLS

EUROPEAN and (GHS) Hazard Symbols

Non-Regulated

Complies with WHMIS 2015

None

Signal Word: None

GHS LABELING AND CLASSIFICATION:

This product does not meet the definition of a hazardous substance or preparation as defined by 29 CFR 1910. 1200 or the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

Components Contributing to Hazard(s):

None Applicable

GHS Hazard Classification(s):

None

Hazard Statement(s):

None

Prevention Statement(s):

None

Response Statement(s):

None

Storage Statement(s):

None

Disposal Statement(s):

None

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

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ACUTE: Contact with eyes may cause irritation. Prolonged or repeated exposure to skin may cause irritation. Prolonged inhalation of liquid may cause upper respiratory tract irritation, headache, nausea or other discomforts. Ingestion may cause abdominal discomfort, nausea, vomiting and diarrhea.

CHRONIC: None known

TARGET ORGANS: ACUTE: Eye, Respiratory System, Skin CHRONIC: None Known

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	GHS HAZARD CLASSIFICATION
Aspergillus Oryzae Broth	Not Assigned	Not Listed	Not Listed	<95%	HAZARD CLASSIFICATION: None
Gx Broth	Not Assigned	Not Listed	Not Listed	<5%	HAZARD CLASSIFICATION: None
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

SECTION 4 - FIRST-AID MEASURES

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if irritation develops.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder contaminated clothing before re-use.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing respiratory system problems may be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: Non-Flammable

AUTOIGNITION TEMPERATURE: Not Established

FLAMMABLE LIMITS (in air by volume, %): Lower Not Upper Not Established
(LEL): Established (UEL):

FIRE EXTINGUISHING MATERIALS: Carbon dioxide, foam, dry chemical, halon, water spray, dry sand, limestone powder.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

Explosion Sensitivity to Mechanical Impact: Not Sensitive.

Explosion Sensitivity to Static Discharge: Not Sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from 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

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.

SPILLS: Contain spill if safe to do so. Sweep or vacuum up and place in an appropriate closed container. Clean up residual material by washing area with water and detergent. Dike or retain dilution water or water from firefighting for later disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing mist generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: Keep the container tightly closed and in a cool, well ventilated place. Avoid freezing or excessive heat.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION**EXPOSURE LIMITS/GUIDELINES:**

PARTICULATES NOT OTHERWISE REGULATED RESPIRABLE FRACTION

	<u>TWA</u>	<u>STEL</u>
OSHA	5 mg/cu m	

PARTICULATES NOT OTHERWISE REGULATED TOTAL DUST

	<u>TWA</u>	<u>STEL</u>
OSHA	15 mg/cu m	

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above. Use local exhaust ventilation to control airborne dusts.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed above, if applicable.

If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:

Liquid

APPEARANCE & ODOR:

This product is a light yellow liquid with a pleasant odor.

ODOR THRESHOLD (PPM):

Pleasant

VAPOR PRESSURE (mmHg):

Not Available

DENSITY:

Not Available

EVAPORATION RATE (nBuAc = 1):

Not Available

BOILING POINT (C°):

Not Available

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FREEZING POINT (C°):	Not Available
pH:	Not Available
SPECIFIC GRAVITY 20°C: (WATER =1)	Not Available
SOLUBILITY IN WATER (%):	Not Available

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Product is stable

DECOMPOSITION PRODUCTS: Thermal decomposition may produce noxious gases such as CO, CO₂.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Avoid moisture and high humidity

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data available for this product:

No LD50 Data available.

SUSPECTED CANCER AGENT: None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: Contact with this product can be irritating to exposed skin, eyes and respiratory system.

SENSITIZATION OF PRODUCT: This product is not considered a skin sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: No information concerning the effects of this product and its components on the human reproductive system.

GERM CELL MUTAGENICITY: This product does not contain ingredients that are suspected to be a germ cell mutagenic.

SECTION 12 - ECOLOGICAL INFORMATION

TOXICITY: No specific data available on this product.

PERSISTENCE AND DEGRADABILITY: No specific data available on this product.

BIOACCUMULATIVE POTENTIAL: No specific data available on this product.

MOBILITY IN SOIL: No specific data available on this product.

RESULTS OF PBT AND vPvB ASSESMENT: No specific data available on this product.

OTHER ADVERSE EFFECTS: No specific data available on this product.

WATER ENDANGERMENT CLASS: No specific data available on this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

RCRA WASTE CODE: None

EU WASTE CODE: None

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:

THIS PRODUCT IS NOT CLASSIFIED AS DANGEROUS GOODS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Non-Regulated Material

HAZARD CLASS NUMBER and DESCRIPTION: None

UN IDENTIFICATION NUMBER: None

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PACKING GROUP: None

DOT LABEL(S) REQUIRED: None

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): None

MARINE POLLUTANT: This product does not contain any ingredients that are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

This product is not classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is not classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

Harmonized Tariff Code None

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: None

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: No Chronic Health: No Fire: No Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): None of the ingredients are on the California Proposition 65 lists.

CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product is categorized as per WHMIS 2015 Hazardous Product Regulations.

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION:

Classification of the mixture according to Regulation (EC) No1272/2008. See section 2 for details.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: Not All components of this product are listed on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

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INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed or Exempt from listing
Australian Inventory of Chemical Substances (AICS):	Listed or Exempt from listing
Korean Existing Chemicals List (ECL):	Listed or Exempt from listing
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed or Exempt from listing
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Listed or Exempt from listing
Swiss Giftliste List of Toxic Substances:	Listed or Exempt from listing
U.S. TSCA:	Listed or Exempt from listing

SECTION 16 - OTHER INFORMATION

PREPARED BY: Chris Eigbrett

MSDS to GHS Compliance

www.msdstoghs.com

Disclaimer: The information and recommendations in this document are accurate to the best of our knowledge. User must conduct their own tests to determine the suitability of these products for their particular purposes. Because of numerous factors affecting results, Biozyme Incorporated **MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PURPOSE**, other than the material conforms to our applicable current specifications. Biozyme Incorporated assumes no legal responsibility for use or reliance on the information contained in this Safety Data Sheet.

END OF SDS SHEET