

SAFETY DATA SHEET

Revision date: 03/27/2023

Version No: 1

Compliant with 29 CFR §1910.1200 HCS 2012

Compliant with HPR WHMIS 2015



Bio Gas Max

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Bio Gas Max
Chemical Name.	Microbial preparation
Declared activity	Bacterial count
Use of the substance/preparation	Professional wastewater treatment
Supplier's Contact	Maryland Biochemical Company, Inc 712 Tobacco Run Drive Bel Air, MD 21015 www.MarylandBiochemical.com
Information Telephone Number	1-800-771-7252 (work hours)
Emergency Telephone Number	1-800-424-9300 (Chemtrec) 24 hours every day

2. HAZARDS IDENTIFICATION

Classification

Classification of the chemical in accordance with 29CFR §1910.1200

WHMIS Classification

Respiratory sensitization Category 1

Label elements

Danger

Hazard statements

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statements - Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P284 - In case of inadequate ventilation wear respiratory protection

Precautionary Statements - Response

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician



Hazards not otherwise classified (HNOC)

Not Applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
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Cellulase (aep)	9012-54-8	1 - 5
Protease (Subtilisin) (aep)	9014-01-1	1 - 5
Alpha-amylase (aep)	9000-90-2	0.1- < 1
Lipase (aep)	9001-62-1	0.1- < 1

* The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician
Skin Contact	Wash off immediately with soap and plenty of water
Inhalation	Move to fresh air
Ingestion	Clean mouth with water and afterwards drink plenty of water
Notes to Physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties	Slightly flammable according to HMIS criteria.
Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	None.
Hazardous Combustion Products	None.
Specific Hazards Arising from the Chemical	May cause allergic respiratory reaction.
Protective Equipment and Precautions for Firefighters	Self-contained breathing apparatus and standard turn-out apparel.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	For personal protection see section 8.
Environmental Precautions	Collect spillage.
Methods for cleaning up	Avoid formation of dust and aerosols. Spilled preparation should be removed immediately to avoid formation of dust from dried preparation. Take up by mechanical means preferably by a vacuum cleaner equipped with a HEPA (High Efficiency Particulate Air) filter. Flush remainder carefully with plenty of water. Avoid splashing, high pressure washing or compressed air cleaning to avoid formation of aerosols. Ensure sufficient ventilation. Wash contaminated clothing.
Other Information	For personal protection see section 8.

7. HANDLING AND STORAGE

Handling	Avoid formation of dust and aerosols. Ensure adequate ventilation
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Storage Temperature Storage Conditions Keep tightly closed in a dry and cool place. 10-25 °C (50-77 °F).
 In unbroken packaging - dry and protect from the sun. The product has been formulated for optimal stability. Extended storage or adverse conditions such as higher temperatures or higher humidity may lead to a higher dosage requirement.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical name	ACGIH TLV
Protease (Subtilisin) (aep)	Ceiling: 0.00006 mg/m ³ Ceiling (as crystalline active enzyme, listed under Subtilisins)

Chemical name	DNEL Dermal Acute Local (Workers)	DMEL Inhalation Long term Local (Workers)
Cellulase (aep)		DMEL = 60 ng/m ³
Protease (Subtilisin) (aep)	DNEL = 0,2% in mixutre (W/W)	DMEL = 60 ng/m ³
Alpha-amylase (aep)	-	DMEL = 60 ng/m ³
Lipase (aep)		DMEL = 60 ng/m ³

Derived No Effect Level (DNEL)
 Derived Minimal Effect Level (DMEL)

Occupational exposure controls
 Engineering Controls Ensure adequate ventilation, especially in confined areas
 Maintain good conditions of industrial hygiene. Some processes may require enclosures, local exhaust ventilation, or other engineering controls to control airborne levels. Additional handling and healthy/safety information is available upon request

Personal Protective Equipment
 Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment that meets HEPA/P100 specifications

Eye Protection Wear safety glasses with side shields (or goggles)
 Skin and body protection Wear protective gloves and protective clothing
 General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice
 Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Powder
 Color Light brown
 Odor Slight fermentation odor
 Odor treshold No information available
 Boiling Point/Range No information available
 Melting Point/Range No information available
 Flash Point No information available
 Freezing point 1 No information available
 Flammability (solid, gas) No information available
 Explosive Properties No information available
 Oxidizing Properties No information available
 Autoignition temperature No information available
 Vapor Pressure No information available
 Decomposition temperature No information available
 Vapor Density No information available
 Density (g/ml) 1
 Evaporation rate No information available
 Solubility Miscible
 Partition Coefficient (n-octanol/water) No information available
 Viscosity No data available

10. STABILITY AND REACTIVITY

Chemical stability
 Stable under recommended storage conditions

Conditions to Avoid
 None

Materials to avoid
 None

Hazardous Decomposition Products
 None

Possibility of hazardous reactions
 None

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Chemical name	Acute oral toxicity	Acute inhalation toxicity	Skin corrosion/irritation	Serious eye damage/eye irritation
Cellulase (aep)	LD50: > 2000 mg/kg bw (OECD TG 401, 420)		Not irritating (OECD TG 404)	Not irritating (OECD TG 405)
Protease (Subtilisin) (aep)	LD50: 1800 mg/kg bw (OECD TG 401)	Exposure based waiving	Slightly irritating (OECD TG 404)	Slightly irritating (OECD TG 405)
Alpha-amylase (aep)	LD50: > 2000 mg/kg bw (OECD TG 401, 420)		Not irritating (OECD TG 404)	Not irritating (OECD TG 405)
Lipase (aep)	LD50: > 2000 mg/kg bw (OECD TG 401, 420)		Not irritating (OECD TG 404)	Not irritating (OECD TG 405)

Chemical name	Specific target organ toxicity (single exposure)	Genetic toxicity	Skin sensitization	Respiratory sensitization
Cellulase (aep)		No indication of mutagenic effects (OECD TG 471, 476)		Sensitizer (Human experience)
Protease (Subtilisin) (aep)	Irritating, respiratory tract (ACGIH 2001)	No indication of mutagenic effects (OECD TG 471, 473, 476)		Sensitizer (Human experience)
Alpha-amylase (aep)		No indication of mutagenic effects (OECD TG 471, 476)		Sensitizer (Human experience)
Lipase (aep)	No data available	No indication of mutagenic effects (OECD TG 471, 476)		Sensitizer (Human experience)

12. ECOLOGICAL INFORMATION

Toxicity

Chemical name	Daphnia, acute	Algae, acute	Fish, acute
Cellulase (aep)	EC50 (48 hours): >39.5 mg aep/l (OECD TG 202)	-	LC50 (96 hours): >39.5 mg aep/l (OECD TG 203)
Protease (Subtilisin) (aep)	EC50 (48 hours): 586 µg aep/l (OECD TG 202)	ErC50 (72 hours): 830 µg aep/l (OECD TG 201)	LC50 (96 hours): 8.2 mg aep/l (OECD TG 203)
Alpha-amylase (aep)	EC50 (48 hours): 31.7 - 457 mg aep/l (OECD TG 202)	ErC50 (72 hours): >= 5.2 mg aep/l (OECD TG 201)	LC50 (96 hours): 58.3 - 326.7 mg aep/l (OECD TG 203)
Lipase (aep)	EC50 (48 hours): >37.4 mg aep/l (OECD TG 202)	ErC50 (72 hours): > 18 mg aep/l (OECD TG 201)	LC50 (96 hours): >68.3 mg aep/l (OECD TG 203)

Persistence/Degradability

Chemical name	Persistence and degradability	Partition coefficient (n-octanol/water)
Cellulase (aep)	Readily biodegradable (OECD 301E/F)	LogPow: <0
Protease (Subtilisin) (aep)	Readily biodegradable (OECD TG 301B)	LogPow: <0
Alpha-amylase (aep)	Readily biodegradable (OECD 301F)	LogPow: <0
Lipase (aep)	Readily biodegradable (OECD 301)	LogPow: <0

Bioaccumulative Potential
Bioaccumulation is unlikely

Chemical name	Bioaccumulative Potential
Cellulase (aep)	Does not bioaccumulate
Protease (Subtilisin) (aep)	Does not bioaccumulate
Alpha-amylase (aep)	Does not bioaccumulate
Lipase (aep)	Does not bioaccumulate

Mobility in soil
Not relevant

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Disposal of wastes
Dispose of in accordance with local regulations.

Contaminated Packaging
Dispose of wastes in an approved waste disposal facility.

14. TRANSPORT INFORMATION

Transport Regulations
No dangerous goods according to transport regulations
No special precautions required

Transport hazard class(es)
not applicable

Packing group
not applicable

Environmental hazards
not applicable

15. REGULATORY INFORMATION

USA, Federal Regulations

TSCA Inventory

All ingredients are listed on TSCA inventory

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 40 CFR Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard No

Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No
USA, State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals

Canada

DSL/NDSL
Does not Comply
WHMIS Statement
This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by WHMIS 2015.

16. OTHER INFORMATION

Training advice Contact Maryland Biochemical's Customer Support Center.

GHS-Classification The classification of eye effects is based on testing of a similar mixture. The GHS calculation method has been used for classification of this mixture.

Disclaimer The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text. Furthermore, as the conditions of use are beyond the control of Maryland Biochemical, it is the responsibility of the customer to determine the conditions of safe use of these products.

End of Safety Data Sheet

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