

Section 1: Identification of the substance/mixture and of the company

1.1 Product Identifier

Product form: Liquid
 Trade name: AMYLOGLUCOSIDASE (A. niger) Concentrate
 Synonyms: Glucoamylase
 Catalog Number: TDF84 (20ml) / TDF85 (100ml)
 Appearance: Product is provided in a plastic container

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

Relevant identified uses: Industrial
 For professional use only
 Use of the substance/mixture: Use as laboratory reagent
 Uses advised against: No additional information available

1.3 Details of the supplier of the Material Safety Data Sheet


Company Name: ANKOM Technology
 Address: 2052 O'Neil Rd.
 Macedon, NY USA 14502
 E-mail: service@ankom.com
 Emergency Phone: (315) 986-3857 8am-5pm EST

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]: Resp. Sens. 1: H334
 Classification according to Directive 67/548/EEC or 1999/45/EC: Xn; R42
 Adverse physicochemical, human health and environmental effects: No additional information available
 For full text of H- and R-phrases, see section 16.

2.2 Label elements according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP): 
 GHS08
 Signal word (CLP): Danger
 Hazardous ingredients: Glucoamylase
 Hazard statements (CLP): H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 Precautionary statements (CLP): P261 – Avoid breathing spray.
 P285 – In case of inadequate ventilation, wear respiratory protection.
 P304+P341 – If INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
 P342+P311 – If experiencing respiratory symptoms, call a POISON CENTER or doctor/physician.
 P501A – Dispose of this material and its container at a hazardous or special waste collection point.

2.3 Other hazards

No additional information available

Section 3: Composition / Information on Ingredients

3.1 Substances

Not applicable

3.2 Mixture

Name	Product Identifier	%	Classification
Glucoamylase	CAS #: 9032-08-0 EC #: 232-877-2	30-40	Directive 67/548/EEC: Xn; R42 Regulation (EC) No. 1272/2008 [CLP]: Resp. Sens. 1, H334

For full text of R-, H-, and EUH-phrases, see section 16.

Section 4: First Aid Measures

4.1 Descriptions of first aid measures

First aid measures general:	Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First aid measures after Inhalation:	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.
First aid measures after skin Contact:	Remove affected clothing and wash all exposed skin with mild soap and water, followed by a warm water rinse.
First aid measures after eye Contact:	Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First aid measures after ingestion:	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/injuries: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed

No additional information available

Section 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing Media:	Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing Media:	Do not use a heavy water stream.

5.2 Special hazards arising from the substance or mixture

No additional information available

5.3 Advice for firefighters

Firefighting instructions:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.
Protection during firefighting:	Do not enter fire area without proper protective equipment including respiratory protection.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2 For emergency responders

Protective equipment: Equip cleanup crew with proper protection.
 Emergency procedures: Ventilate area.

6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4 Reference to other sections

See Heading 8: Exposure controls/personal protection.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work. Provide good ventilation in process areas to prevent formation of vapor. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities			
Storage conditions:	Keep only in the original container in a cool, well ventilated place away from: Keep container closed when not in use.		
Incompatible materials:	Sources of ignition. Direct sunlight.		
7.3 Specific end use(s)			
No additional information available			
Section 8: Exposure Controls / Personal Protection			
8.1 Control parameters			
No additional information available			
8.2 Exposure controls			
Personal protective equipment:	Avoid all unnecessary exposure.		
Hand protection:	Wear protective gloves.		
Eye protection:	Wear chemical goggles or face shield.		
Respiratory protection:	In case of inadequate ventilation, wear respiratory protection.		
Other information:	Do NOT eat, drink, or smoke when handling this material.		
Section 9: Physical and Chemical Properties			
9.1 Information on basic physical and chemical properties			
Physical state:	Liquid	Flammability (solid, gas):	No data available
Color:	Colorless	Vapor Pressure:	No data available
Odor:	Characteristic	Relative vapor density at 20°C:	No data available
Odor Threshold:	No data available	Relative Density:	No data available
pH:	No data available	Solubility:	No data available
Relative evaporation rate (butylacetate=1):	No data available	Log Pow:	No data available
Melting point:	No data available	Log Kow:	No data available
Freezing point:	No data available	Viscosity, kinematic:	No data available
Boiling point:	No data available	Viscosity, dynamic:	No data available
Flash point:	No data available	Explosive properties:	No data available
Self-ignition temperature:	No data available	Oxidizing properties:	No data available
Decomposition temperature:	No data available	Explosive limits:	No data available
9.2 Other information			
No additional information available			
Section 10: Stability and Reactivity			
10.1 Reactivity			
No additional information available			
10.2 Chemical stability			
Not established.			
10.3 Possibility of hazardous reactions			
Not established.			
10.4 Conditions to avoid			
Direct sunlight. Extremely high or low temperatures.			
10.5 Incompatible materials			
Strong bases.			
10.6 Hazardous decomposition products			
Fume. Carbon monoxide. Carbon dioxide.			

Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity:	Not classified. Based on available data, the classification criteria are not met.
Skin corrosion/irritation:	Not classified. Based on available data, the classification criteria are not met.
Serious eye damage/irritation:	Not classified. Based on available data, the classification criteria are not met.
Respiratory or skin sensitization:	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Based on available data, the classification criteria are not met.
Germ cell mutagenicity:	Not classified. Based on available data, the classification criteria are not met.
Carcinogenicity:	Not classified. Based on available data, the classification criteria are not met.
Reproductive toxicity:	Not classified. Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure)	Not classified. Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure)	Not classified. Based on available data, the classification criteria are not met.
Aspiration hazard:	Not classified. Based on available data, the classification criteria are not met.
Potential adverse human health effects and symptoms:	Not classified. Based on available data, the classification criteria are not met.

Section 12: Ecological Information

12.1 Toxicity

No additional information available

12.2 Persistence and degradability

TDF84 / TDF85: Not established

12.3 Bioaccumulative potential

TDF84 / TDF85: Not established

12.4 Mobility in soil

No additional information available

12.5 Results of PBT and vPvB assessment

No additional information available

12.6 Other adverse effects

Other information: Avoid release to the environment

Section 13: Disposal Considerations

13.1 Waste treatment methods

Waste disposal recommendations:	Dispose in a safe manner in accordance with local/national regulations.
Ecology – waste materials:	Avoid release to the environment.

Section 14: Transport Information (in accordance with ADR/RID/ADNR/IMDG/ICAO/IATA)

14.1 UN number

No dangerous goods with respect to transport regulations

14.2 UN proper shipping name

Not applicable

14.3 Transportation hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Other information: No supplementary information available.

14.6 Special precautions for user
14.6.1 Overland transport

No additional information available

14.6.2 Transport by sea

No additional information available

14.6.3 Air transport

No additional information available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Section 15: Regulatory Information

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

EU-Regulations: No REACH Annex XVII restrictions. Contains no REACH candidate substance.

National regulations: No additional information available.

15.2 Chemical safety assessment

No chemical safety assessments were carried out.

Section 16: Other Information

Revision: See document footer for version information.

Data sources: REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling, and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006.

Other information: None.

16.1 Full text of R, H, and EUH-phrases

Resp. Sens. 1: Respiratory sensitization Category 1

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

R42: May cause sensitization by inhalation

Xn: Harmful

SDS EU (REACH Annex II)

Information in this document 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.