



Malt Amylase Standard (α -amylase and β -amylase)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 01/22/2018

Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Malt Amylase Standard (α -amylase and β -amylase)
Product code : E-MASTP

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Use as laboratory reagent

1.3. Supplier

Manufacturer

Megazyme
Bray Business Park
Bray, A98 YV29 - Ireland
T +353 12861220 - F +353 12861264
cs@megazyme.com - www.megazyme.com

1.4. Emergency telephone number

Emergency number : +353 12861220 [9 am to 5 pm GMT - Monday to Friday]

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Respiratory sensitization, Category 1

May cause an allergy or asthma symptoms or breathing difficulties if inhaled

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : May cause an allergy or asthma symptoms or breathing difficulties if inhaled
Precautionary statements (GHS-US) : Avoid breathing dust.
[In case of inadequate ventilation] wear respiratory protection.
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing
If experiencing respiratory symptoms: Call a poison center or doctor
Dispose of contents/container to

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

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Name	Common Name (Synonyms)	Product identifier	%	GHS-US classification
alpha-amylase	1,4- α -D-glucan glucanohydrolase / 1,4- α -D-glucanase / 1,4- α -glucanase / α -amylase from hog pancreas / α -amylase from human saliva / α -amylase, DFP treated from hog pancreas / α -amylase, PMSF treated from hog pancreas / amano AD 1 / amylase AD / amylase THC 250 / amylase, α - / amylogal CS / amyloisin 5 / amylopsin / amylosubtilin / aquazym 120L / aquazyme 240 / bactosol TK / BAM 240 / ban / ban (enzyme) / BAN 120L / BAN 240 / ban 480L / beisol T 2090 / biobake 40000 / bioferm / bioferm P / bioprep TBS / biotex GT / biozyme A / biozyme F / brewers Amylique TS / buclamase / canalalpha 1000P / canalalpha 600L / canalalpha 60P / cenazyme SA 7 / clarase / denazyme SA 7 / desize 160 / E.C. 3.2.1.1 / EC 3.2.1.1 / ekikakoso 6T / EMCEmaltex 1000 / endoamylase / FD Super / fortizyme / fungamyl / fungamyl 2500BG / fungamyl 300 L / fungamyl 800L / G 995 / G6-Amylase / gamalpha HT 120L / gemsiz 4A / G-zyme G 995 / hitempase / kleistase KD / kleistase L 1 / kleistase T 5 / kokugen K / maltogenase 4000L / maxamyl / maxamyl HT 3000 / maxamyl WL 15,000 / maxilase / pivozin / plurafact oxam / ptyalin / speedase HS / speedase M / speedase XP 404 / spitase CP 1 / sumizyme L / taka-amylase / taka-amylase A / taka-diastase / takalite / takalite L 340 / takatherm / tanase / termamyl / termamyl 120L / termamyl 60L / termamyl 60T / thermolase / WC 8	(CAS-No.) 9000-90-2	50 - 60	Resp. Sens. 1, H334
beta-amylase	amylase, beta- / b-amylase / b-amylase (sweet potato) / b-amylase from sweet potato / beta-amylase (sweet potato) / beta-amylase 1500S / beta-amylase from barley / beta-amylase from sweet potato / biozyme C / biozyme M / biozyme M 2 / biozyme ML / E.C. 3.2.1.2 / exoamylase / Hi-Maltosin G / Hi-Maltosin GL / saccharogenamylase / spezyme BBA 1500 / spezyme DBA / uniase	(CAS-No.) 9000-91-3	40 - 50	Resp. Sens. 1, H334

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
- First-aid measures after skin contact : Wash skin with plenty of water.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause an allergy or asthma symptoms or breathing difficulties if inhaled.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid breathing dust.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid breathing dust.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

alpha-amylase (9000-90-2)

Not applicable

beta-amylase (9000-91-3)

Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Type	Material	Permeation	Thickness (mm)	Permeation
Disposable gloves	Nitrile rubber (NBR)	3 (> 60 minutes)		2 (< 1.5)

Eye protection:

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Safety glasses

Type	Use	Characteristics
Safety glasses	Dust	With side shields, clear

Skin and body protection:

Wear suitable protective clothing

Type
Lab coat

Respiratory protection:

Wear respiratory protection.

Device	Filter type	Condition
Dust mask	Type P1	Protection for Solid particles



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Color	: No data available on colour
Odor	: None
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: Not applicable
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

alpha-amylase (9000-90-2)

LD50 oral rat	> 7500 mg/kg (Rat)
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

alpha-amylase (9000-90-2)

LC50 fish 1	> 100 mg/l (LC50)
EC50 Daphnia 1	> 100 mg/l (EC50)
Threshold limit algae 1	> 100 mg/l (EC50)

12.2. Persistence and degradability

alpha-amylase (9000-90-2)

Persistence and degradability	Readily biodegradable in water.
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beta-amylase (9000-91-3)

Persistence and degradability	Biodegradability in water: no data available.
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12.3. Bioaccumulative potential

alpha-amylase (9000-90-2)

Bioaccumulative potential	Bioaccumulation unlikely.
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beta-amylase (9000-91-3)

Bioaccumulative potential	No bioaccumulation data available.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

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Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Full text of H-phrases:

H334

May cause an allergy or asthma symptoms or breathing difficulties if inhaled

SDS US (GHS HazCom 2012)

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.