

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 09-Aug-2023

Revision Number 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) 65872***

Safety data sheet number 65872***

Product Name EXTENDA STANDARD

Pure substance/mixture Mixture

Contains GLUCO AMYLASE

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

Recommended use Enzyme Biocatalyst Food industry

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Respiratory sensitisation	Category 1 - (H334)
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2.2. Label elements

Contains GLUCO AMYLASE

**Signal word**

Danger

Hazard statements

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

Precautionary statements

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

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

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor

P501 - Dispose of contents/ container to an approved waste disposal plant

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

Additional information

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
GLUCO AMYLASE 9032-08-0	10 - 20%	232-877-2	-	Resp. Sens. 1 (H334)	-	-	-
PULLULANASE*** 9075-68-7	0 - < 1%	232-983-9	-	-	-	-	-
LYSOPHOSPHOLIPASE*** 9001-85-8	0 - < 1.	618-333-0	-	-	-	-	-
AMYLASE, alpha*** 9000-90-2	0 - < 1%	232-565-6	-	Resp. Sens. 1 (H334)	-	-	-

Full text of H- and EUH-phrases: see section 16This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)**SECTION 4: First aid measures**

4.1. Description of first aid measures

Inhalation	Remove to fresh air. Get medical attention if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Clean mouth with water and drink afterwards plenty of water. (Get medical attention immediately if symptoms occur).

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Eyes	May cause temporary eye irritation.
Dermal	May cause slight irritation.
Ingestion	May cause irritation

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Hazardous combustion products	May emit toxic fumes under fire conditions. Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions	Ensure adequate ventilation.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Avoid generation of dust. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean contaminated objects and areas thoroughly observing environmental regulations.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Avoid generation of dust.
General hygiene considerations	Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	The product can be transported at ambient temperature. Following delivery, the product should be stored as recommended.
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7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM)	The information required is contained in this Safety Data Sheet.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Biological occupational exposure limits	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
Derived No Effect Level (DNEL) - Workers	No information available

Derived No Effect Level (DNEL) - General Public No information available.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
AMYLASE, alpha*** 9000-90-2	5.2 µg/l		0.52 µg/l		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
AMYLASE, alpha*** 9000-90-2					65000 µg/l

8.2. Exposure controls

Engineering controls Ensure adequate ventilation.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Chemical resistant gloves required for prolonged or repeated contact. Gloves must conform to standard EN 374.

Skin and body protection No special protective equipment required.

Respiratory protection In case of inadequate ventilation wear respiratory protection. Dust filter P3 (for especially fine dust/powder).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	Light., to, Dark., Brown
Odour	Slight.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point		No information available
Initial boiling point and boiling range		No information available
Flammability		No information available
Flammability Limit in Air		No information available
Upper flammability or explosive limits		
Lower flammability or explosive limits		

Flash point	> 100 °C	No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
pH	4 - 9	No information available
pH (as aqueous solution)		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Water solubility	Miscible in water	No information available
Solubility(ies)		No information available
Partition coefficient		No information available
Vapour pressure		No information available
Relative density		No information available
Bulk density		
Liquid Density	1.18	
Relative vapour density		No information available
Particle characteristics		Not applicable
Particle Size		
Particle Size Distribution		
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information**SECTION 10: Stability and reactivity****10.1. Reactivity**

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure**

Product Information

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity**Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
GLUCO AMYLASE	> 2000	-	-
PULLULANASE***	> 2000	-	-
LYSOPHOSPHOLIPASE***	> 2000	-	-
AMYLASE, alpha***	> 2000	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

GLUCO AMYLASE (9032-08-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404		Dermal			non-irritant

PULLULANASE (9075-68-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404		Dermal			non-irritant

LYSOPHOSPHOLIPASE (9001-85-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404		Dermal			non-irritant

AMYLASE, alpha (9000-90-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 404		Dermal			non-irritant

Serious eye damage/eye irritation No information available.

GLUCO AMYLASE (9032-08-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 405		eye			non-irritant

PULLULANASE (9075-68-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 405		eye			non-irritant

LYSOPHOSPHOLIPASE (9001-85-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 405					non-irritant

AMYLASE, alpha (9000-90-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD 405		eye			non-irritant

Respiratory or skin sensitisation No information available.

GLUCO AMYLASE (9032-08-0)

Method	Species	Exposure route	Results
	Human evidence	Inhalation	Sensitising

PULLULANASE (9075-68-7)

Method	Species	Exposure route	Results
	Human evidence	Inhalation	Sensitising

LYSOPHOSPHOLIPASE (9001-85-8)

Method	Species	Exposure route	Results
	Human evidence	Inhalation	Sensitising

AMYLASE, alpha (9000-90-2)

Method	Species	Exposure route	Results
	Human evidence	Inhalation	Sensitising

Germ cell mutagenicity No information available.

Component Information

GLUCO AMYLASE (9032-08-0)

Method	Species	Results
OECD 471 OECD 476		Not mutagenic

PULLULANASE (9075-68-7)

Method	Species	Results
OECD 471 OECD 476		Not mutagenic

LYSOPHOSPHOLIPASE (9001-85-8)

Method	Species	Results
OECD 471 OECD 476		Not mutagenic

AMYLASE, alpha (9000-90-2)

Method	Species	Results
OECD 471 OECD 476		Not mutagenic

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

GLUCO AMYLASE (9032-08-0)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	31.7 - 457	48 hours	
OECD Test No. 203: Fish, Acute Toxicity Test	Fish	LC50	58.3 - 326.7 mg/L	96 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Algae	ErC50	>= 5.2 mg/L	72 hours	

PULLULANASE (9075-68-7)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	31.7 - 457 mg/L	48 hours	
OECD Test No. 203: Fish, Acute Toxicity Test	Fish	LC50	58.3 - 326.7 mg/L	96 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Algae	ErC50	>= 5.2 mg/L		

LYSOPHOSPHOLIPASE (9001-85-8)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test		LC50	58.3 - 326.7 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	31.7 - 457 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Algae	ErC50	>= 5.2 mg/L		

AMYLASE, alpha (9000-90-2)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	31.7 - 457 mg/L	48 hours	
OECD Test No. 203: Fish, Acute Toxicity Test	Fish	LC50	: 58.3 - 326.7 mg/L	96 hours	
OECD Test No. 201:	Algae	ErC50	>= 5.2 mg/L	72 hours	

Freshwater Algae and Cyanobacteria, Growth Inhibition Test					
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12.2. Persistence and degradability

Persistence and degradability No information available.

GLUCO AMYLASE (9032-08-0)

Method	Exposure time	Value	Results
		Biodegradation	Readily biodegradable

PULLULANASE (9075-68-7)

Method	Exposure time	Value	Results
			Readily biodegradable

LYSOPHOSPHOLIPASE (9001-85-8)

Method	Exposure time	Value	Results
			Readily biodegradable

AMYLASE, alpha (9000-90-2)

Method	Exposure time	Value	Results
			Readily biodegradable

12.3. Bioaccumulative potential**Bioaccumulation****Component Information**

Chemical name	Partition coefficient
GLUCO AMYLASE	< 0
PULLULANASE***	< 0
LYSOPHOSPHOLIPASE***	< 0
AMYLASE, alpha***	< 0

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
GLUCO AMYLASE	The substance is not PBT / vPvB
PULLULANASE***	The substance is not PBT / vPvB
LYSOPHOSPHOLIPASE***	The substance is not PBT / vPvB
AMYLASE, alpha***	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products	Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.
Contaminated packaging	Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).***

Product restricted per REACH Annex XVII: 3

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

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

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		
Revision Note ***Indicates updated data since last publication			

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
 European Chemicals Agency (ECHA) (ECHA_API)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
 Organisation for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Prepared By J Spenceley

Revision date 09-Aug-2023

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage,

transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet