

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

1.1. Product identifier

Product form : Mixture
Product name : STAR ENZYME DIGESTER
Product code : 00950012

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Specialised biological preparation for breaking down organic matter in waste water systems.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Star International
Star House, Turbine Business Park,
Turbine Road, Merseyside
CH41 9BA
UK
T +44 (0) 1244 504 500 (9a to 5pm)
nquiries@star-international.co.uk

1.4. Emergency telephone number

Emergency number : +44 (0) 1244 504 500 (9a to 5pm)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	NHS 111/NHS 24/NHS Direct		111 0845 4647	or call a doctor

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2 H319
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes eye irritation. Presents no particular risk to the environment.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning
Contains : C08-10 Alkyl glucoside
Hazard statements (CLP) : H319 - Causes serious eye irritation.
Precautionary statements (CLP) : P262 - Do not get in eyes, on skin, or on clothing.
P280 - Wear eye protection when handling product concentrate.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

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contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

This mixture is not considered to be persistent, bioaccumulating and toxic (PBT)
This mixture is not considered to be persistent, bioaccumulating and toxic (PVB)
Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
C08-10 Alkyl glucoside	CAS-No.: 68515-73-1 EC-No.: 500-220-1 REACH-no: 01-2119488530-36-XXXX	$\geq 1 - < 3$	Eye Dam. 1, H318
Alcohols, C9-11, ethoxylated	CAS-No.: 68439-46-3	0.1-1%	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318

Specific concentration limits:

Name	Product identifier	Specific concentration limits
C08-10 Alkyl glucoside	CAS-No.: 68515-73-1 EC-No.: 500-220-1 REACH-no: 01-2119488530-36-XXXX	($3 \leq C < 9.99$) Eye Irrit. 2, H319 ($10 \leq C < 100$) Eye Dam. 1, H318

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : To our knowledge, the product does not present any particular risk, under normal conditions of use. Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : To our knowledge, the product does not present any particular risk, under normal conditions of use.
Symptoms/effects after inhalation : May cause slight temporary irritation.
Symptoms/effects after skin contact : May cause slight irritation to the skin.
Symptoms/effects after eye contact : Direct contact with the eyes is likely to be irritating.

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Symptoms/effects after ingestion : May cause irritation to the digestive tract.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : None known.

5.3. Advice for firefighters

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

General measures : Avoid contact with skin and eyes. Wash immediately with plenty of water.

6.1.1. For non-emergency personnel

Protective equipment : No special requirement . Avoid contact with skin.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.
Measures in case of dust release : Not applicable (aqueous liquid).

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".
Emergency procedures : Wash immediately with plenty of water.

6.2. Environmental precautions

This product does not present any particular risk for the environment.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak without risks if possible.
Methods for cleaning up : Clean contaminated surfaces with an excess of water.
Other information : Small amount of unwanted product may be flushed with water to sewer.

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 : Avoid contact with skin and eyes. Ensure spraying away from persons.
Hygiene measures : Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Does not require any specific or particular technical measures.
Storage conditions : Store in a dry place.
Incompatible products : Strong acids. Strong alkalis.
Incompatible materials : Strong acids. Strong alkalis.

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

STAR ENZYME DIGESTER	
United Kingdom - Occupational Exposure Limits	
Remark	Contains no substances with occupational work exposure limits.

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

C08-10 Alkyl glucoside (68515-73-1)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	595000 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	420 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	35.7 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	124 mg/m ³
Long-term - systemic effects, dermal	357000 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.176 mg/l
PNEC aqua (marine water)	0.0176 mg/l
PNEC aqua (intermittent, freshwater)	0.27 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	1.516 mg/kg dwt
PNEC sediment (marine water)	0.152 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.654 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	111.11 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	560 mg/l

8.1.5. Control banding

No additional information available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

No special requirement.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear eye protection. Handling and dilution of concentrates.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Handling and dilution of concentrates

8.2.2.2. Skin protection

Skin and body protection:

No special requirement

Hand protection:

In case of repeated or prolonged contact wear gloves

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions

8.2.2.4. Thermal hazards

Thermal hazard protection:

Not required.

8.2.3. Environmental exposure controls

Environmental exposure controls:

No special environmental concerns.

Consumer exposure controls:

The substance is not classified for human health hazards or for environment effects and it is not PBT or vPvB so that no exposure assessment or risk characterisation is required. For tasks where the intervention of workers is required, the substance must be handled in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear/slightly cloudy.
Appearance	: Liquid.
Odour	: Pleasant.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available

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Decomposition temperature	: Not available
pH	: 4 – 5
Viscosity, kinematic	: Not available
Solubility	: Easily soluble.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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.

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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

C08-10 Alkyl glucoside (68515-73-1)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
Alcohols, C9-11, ethoxylated (68439-46-3)	
LD50 oral	> 300 mg/kg LD50: > 300 -<= 2000 mg/kg. Remarks: Harmful if swallowed.

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Alcohols, C9-11, ethoxylated (68439-46-3)	
LD50 dermal	> 2000 LD50: > 2000 -<= 5000 mg/kg. Remarks: May be harmful in contact with skin.
LC50 Inhalation - Rat	Remarks: Low toxicity by inhalation.
Skin corrosion/irritation	: Not classified pH: 4 – 5
Serious eye damage/irritation	: Causes serious eye irritation. pH: 4 – 5
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

C08-10 Alkyl glucoside (68515-73-1)	
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
Aspiration hazard	: Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

C08-10 Alkyl glucoside (68515-73-1)	
LC50 - Fish [1]	100.81 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
LC50 - Fish [2]	170 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	27.22 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	37 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Alcohols, C9-11, ethoxylated (68439-46-3)	
LC50 - Fish [1]	> 1 ng/l LL/EL/IL50 > 1 <= 10 mg/l
NOEC chronic fish	> 1 mg/l NOEC/NOEL > 1.0 -<=10 mg/l (based on test data)
NOEC chronic crustacea	> 1 mg/l NOEC/NOEL > 1.0 -<=10 mg/l (based on test data)

12.2. Persistence and degradability

STAR ENZYME DIGESTER	
Persistence and degradability	Readily biodegradable.

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12.3. Bioaccumulative potential

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Bioaccumulative potential

The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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This mixture is not considered to be persistent, bioaccumulating and toxic (PBT)

This mixture is not considered to be persistent, bioaccumulating and toxic (PVB)

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

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Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate

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Abbreviations and acronyms:	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H318	Causes serious eye damage.

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Full text of H- and EUH-statements:

H319	Causes serious eye irritation.
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The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

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.